



Dacorum Borough Council

Local Plan

Dacorum Local Plan (2020-2038) Emerging Strategy for Growth Interim Sustainability Appraisal Report Appendices

November 2020



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Appendix A SA Framework

Objective	Sub-objectives / Appraisal Criteria	Site specific questions
Biodiversity, including flora and fauna, and geodiversity		
<p>1. To protect, maintain and enhance biodiversity and geodiversity at all levels [Biodiversity & geodiversity]</p>	<p>To protect, maintain and enhance designated wildlife and geological sites (international, national and local) and protected species to achieve favourable condition</p> <p>To help achieve targets set by the Biodiversity Action Plan (BAP)</p> <p>To support farming and countryside practices that enhance wider biodiversity and landscape quality by economically and socially valuable activities (e.g. grazing, coppicing, nature reserves)</p> <p>To manage woodlands and other habitats of value for biodiversity in a sustainable manner and protect them against conversion to other uses</p> <p>To conserve and enhance the green infrastructure and blue infrastructure within the Borough.</p> <p>To recognise the social/environmental value and increase access to woodlands, wildlife & geological sites and green spaces particularly near/in urban areas, including encouraging people to come into contact with, understand, and enjoy nature</p> <p>To consider the effects of light pollution on night flying fauna</p> <p>To recognise the potential biodiversity value of brownfield land and identify appropriate mitigation measures</p> <p>To actively seek to promote ecological connectivity between existing greenspaces</p>	<p>Would development of the site:</p> <ul style="list-style-type: none"> • provide opportunities for enhancement of biodiversity or biodiversity gain? • avoid fragmentation & improve connectivity, for example through the provision of wildlife corridors and buffer areas? • contribute to a wider green infrastructure strategy, for example through the provision of green walls and roofs? • protect woodlands, hedgerows, trees and watercourses? <p>Is it likely that there are any protected species or habitats on or near the site?</p> <p>Would development of the site affect designated sites?</p> <p>Would development of the site impact on a recognised site of geological / geomorphological importance?</p>

Water		
<p>2. To protect, maintain and enhance water resources (including water quality and quantity) [Water quality/quantity]</p>	To encourage higher water efficiency and conservation in new and existing developments; promoting local water recycling initiatives and rain water harvesting	<p>Would development of the site:</p> <ul style="list-style-type: none"> • lead to positive effects on water quality • be of a sufficient size to act as an exemplar for sustainable water management? • operate within the existing and planned future capacities for water supply and wastewater treatment? • enable resolution of existing wastewater infrastructure problems?
	To ensure water consumption does not exceed levels which can be supported by natural processes and storage systems	
	To improve ecological status and flow of rivers and encourage practices which reduce nitrate levels in groundwater	
	To reduce the number and severity of pollution incidents and reduce the risks to groundwater resource from contamination	
	To take account of the existing and future capacity of sewerage network	
<p>3. To reduce flood risk [Flood risk]</p>	To avoid developments in areas which at risk from fluvial, sewer, groundwater flooding (for instance natural flood plains) or storm surges while taking into account the impacts of climate change	<p>Is the site located outside of an area at risk from flooding? (e.g. flood zones 3a and 3b, or areas of known pluvial flooding)</p> <p>Would development of the site:</p> <ul style="list-style-type: none"> • reduce the risk of flooding to people and property? • resolve an existing drainage problem? • involve an increase impermeable surfaces? • be at risk from flooding arising from climate change?
	To ensure that developments which are at risk from flooding, or are likely to be at risk in future due to climate change, are sufficiently adapted	
	To take account of additional surface water generated by new development	
	To promote properly designed and maintained sustainable drainage systems (SUDs) to reduce flood risk, surface water run-off and contribute to improved water quality, green and blue infrastructure and function.	
	To seek opportunities for Natural Flood Management where appropriate	

Climatic Factors		
<p>4. Reduce greenhouse gas emissions and adapt to the effects of climate [Climate change]</p>	To minimise greenhouse gas emissions (particularly CO ₂) for instance through more energy efficient design and promoting carbon neutral development	Is the site of sufficient size to act as an exemplar of sustainable development?
	To enable the use of sustainable modes of transport	Does the site location encourage sustainable modes of travel?
	To promote increased carbon sequestration e.g. through increases in vegetation cover	Would local topography discourage the use of active travel modes?
	To encourage technological development to provide clean and efficient use of resources	Is the site located within reasonable walking distance of public transport?
	To adopt lifestyle changes which help to mitigate and adapt to climate change, such as promoting water and energy efficiency (through for instance higher levels of home insulation)	Is the site of sufficient size to provide on or off-site CHP?
	To promote the incorporation of renewable energy technology into all new developments	Is the site located such that it could be linked to an existing CHP facility?
	To encourage positive attitudes towards renewable energy schemes (e.g. biomass and wind energy)	<ul style="list-style-type: none"> Will it develop significant renewable energy resources?
	To promote design measures which enable developments to withstand and accommodate the likely impacts and results of climate change (for instance through robust and weather resistant building structures)	<p>Would development of the site:</p> <ul style="list-style-type: none"> be able to support the generation & use of renewable resources? be able to take advantage of passive solar gain through orientation? be able to minimise use of energy through design and occupation? <p>Is the site suitable for promoting the use of a travel plan?</p>

Air Quality		
5. Achieve good air quality, especially in urban areas [Air quality]	To reduce transport related air quality problems	Would development of the site affect an AQMA or lead to its designation? Would development of the site be likely to improve air quality within an area of poor air quality? Will the proposed use increase air pollution (from traffic or industrial processes)?
	To ensure that development proposals do not make existing air quality problems worse and where possible improve the quality	
	To avoid siting sensitive developments in areas with poor air quality	
	To address existing or potential air quality problems	
Soil and Material Assets		
6. Make efficient use of land and protect soils [Soils]	To safeguard high quality soils, such as agricultural land grades 1, 2 and 3a, from development	Would development of the site involve the loss of best and most versatile agricultural land? Is the site on previously developed land? Is the site capable of supporting higher density development and/or a mix of uses? Would development of the site: <ul style="list-style-type: none"> • restore vacant / contaminated land? • clean up contaminated land? • involve the loss of greenfield land • involve the loss of gardens? • allow re-use of existing buildings?
	To limit contamination/degradation/loss of soils due to development	
	To concentrate new developments on previously developed land (PDL)	
	To minimise use of greenfield sites for development	
	To optimise the efficient use of land by measures such as higher densities and mixed use developments	
	To encourage the remediation of contaminated and derelict land and buildings	
7. To use natural resources, both finite and renewable, as efficiently as possible, and re-use finite resources or recycled alternatives wherever possible [Resource efficiency]	To encourage maximum efficiency and appropriate use of materials, particularly from local and regional sources, using sustainable design and construction techniques	Would development of the site: <ul style="list-style-type: none"> • be of a size to support waste to energy options? • be able to minimise demand for primary minerals & aggregates? • be able to use materials from nearby sources?
	To encourage new developments to incorporate renewable, secondary, locally sustainably sourced or materials of lower environmental impact in buildings and infrastructure	
	To safeguard reserves of exploitable minerals from sterilisation by other developments	

	To increase recycling and composting rates and encourage easily accessible recycling systems as part of new developments	<ul style="list-style-type: none"> be able to recycle local stone to reinforce local character? <p>Is the site in a mineral safeguarding zone?</p>
	To promote all developments and occupants to minimise waste and optimise the recovery and recycling of waste.	
Historic Environment		
<p>8. To identify, conserve and enhance the historic environment and heritage assets [Historic environment]</p>	To safeguard and enhance the historic environment and restore historic character where appropriate, based on sound historical evidence	<p>Could development of the site enhance features & settings of historical, archaeological or cultural importance and the enjoyment of such assets?</p> <p>Would development of the site adversely affect a Conservation Area, Listed Building, RPG, area of archaeological importance, or SM?</p> <p>Would development adversely affect a building, structure or area of local heritage significance?</p>
	To promote local distinctiveness by maintaining and restoring historic buildings and areas including their settings, encouraging the re-use of valued buildings and thoughtful high quality design in housing and mixed use developments – to a density which respects the local context and townscape character, and includes enhancement of the public realm	
	To promote public education, enjoyment and access of the built heritage and archaeology	
Landscape & Townscape		
<p>9. To conserve and enhance landscape and townscape character and encourage local distinctiveness [Landscape & townscape]</p>	To protect and enhance landscape and townscape character	<p>Would development of the site:</p> <ul style="list-style-type: none"> have the potential to enhance the quality & diversity of landscape / townscape? lead to coalescence of existing towns/villages? be likely to adversely affect an area of landscape importance? <p>Would development of the site affect townscapes?</p> <p>Would development of the site provide green infrastructure as part of wider strategy?</p>
	To evaluate the sensitivity of the landscape to new/inappropriate developments and avoid inappropriate developments in these areas	
	To protect the purpose for which the Chilterns AONB is designated	
	To protect 'dark skies' from light pollution, and promote less invasive lighting sources while considering the balance between safety and environmental impacts	
	To minimise the visual impact of new developments	
	To encourage contribution of public art	

Population & Human Health, and Social Factors		
<p>10. To improve the health and wellbeing of the local population [Health & wellbeing]</p>	To include measures which will improve everyone's access to high quality health care facilities	<p>Would development of the site:</p> <ul style="list-style-type: none"> • provide new healthcare facilities or enable access to existing ones? • provide opportunities to extend or improve the cycle/footpath network? • affect public rights of way? • provide open space for informal and/or formal recreation? • enable enhanced access to existing open / recreational space? • provide open space for allotments? • integrate with a wider green infrastructure strategy? <p>Would the site involve locating a noisy or polluting land use next to a sensitive land use?</p>
	To promote and enable the health advantages of walking and cycling and community based activities	
	To identify, protect and enhance open spaces, such as rivers and canals, parks and gardens, allotments and playing fields, and the links between them, for the benefit of people and wildlife	
	To minimise noise and odour pollution, particularly in residential areas	
	To narrow the income gap between the poorest and wealthiest parts of the area and to reduce health differential	
	To take health and access issues into account in new developments	
<p>11. To develop in sustainable locations [Sustainable locations]</p>	To reduce the need to travel, particularly by private car, through closer integration of housing, jobs and services	<p>Would development of the site help to reduce the need to travel?</p> <p>Is the site within a main settlement?</p> <p>Is the site within close proximity to key services (e.g. schools, food shops, public transport, health centres etc.)?</p> <p>Is the site suitable for the promotion of Green Transport Plans, including car pools, car sharing and choice of non-fossil fuel powered vehicles, as part of new developments?</p>
	To enable and encourage walking, cycling and the use of public transport	
	To ensure that services and facilities are accessible by sustainable modes of transport	
	To encourage provision of new and support existing local centres	
	To encourage well-designed mixed-use developments in the heart of urban areas, create viable and attractive town centres that have vitality and life, and discourage out-of-town developments	

		Does the site have the potential for facilities for cycle parking and storage?
12. To improve community cohesion through reducing inequalities, promoting social inclusion and reducing crime and the fear of crime [Community cohesion]	To include measures which will improve everyone’s access to high quality education, community facilities and public transport	<p>Would development of the site:</p> <ul style="list-style-type: none"> • provide local community services & facilities or enable access to existing ones? • provide facilities that existing communities could share? • help support existing community facilities? • promote mixed tenure & mixed use? • include provision of religious / cultural uses? <p>Could development of the site:</p> <ul style="list-style-type: none"> • reduce crime through design measures? • increase the frequency of nuisance complaints and criminal / anti-social activity (noise pollution, vandalism, anti-social behaviour orders)?
	To recognise the value of the multi-cultural/faith diversity of the peoples in the Borough	
	To improve the quality of life in urban areas by making them more attractive places in which to live and work, and to visit	
	To encourage community cohesion	
	To encourage high quality design in new developments, including mixed uses, to create local identity and encourage a sense of community pride	
	To ensure facilities and services are accessible by people with disabilities and minority groups	
	To encourage people to access the learning and skills they need for high quality of life	
	To ensure that the Plan does not discriminate on the basis of disability, ethnic minority, or gender	
	To tackle deprivation in the Borough’s most deprived areas	
	To plan new developments to help reduce crime and fear of crime through thoughtful design of the physical environment, and by promoting well-used streets and public spaces	
To support crime/safety initiatives to tackle anti-social behaviour		
13. Ensure that everyone has access to good quality housing that meets their needs	To contribute towards meeting the Borough’s housing needs	<p>Would development of the site secure:</p> <ul style="list-style-type: none"> • affordable homes? • Lifetime Homes?
	To provide a range of housing types, size and tenure, including high quality affordable and key worker housing that meet the needs of all communities with the Borough	

[Housing]	To reduce the percentage of unfit/non-decent homes	
	To help reduce homelessness	
	Meet the needs of the gypsy and traveller communities	
Economic Factors		
14. Achieve sustainable levels of prosperity and economic growth [Sustainable prosperity]	To support an economy in the Borough which draws on the knowledge base, creativity and enterprise of its people	<p>Would development of the site:</p> <ul style="list-style-type: none"> • lead to the loss of viable employment/jobs? • contribute employment floorspace? • support the vibrancy of the town and local centres?
	To promote and support economic diversity, micro, small and medium sized enterprises, community-based enterprises and local investment	
	To support the economy with high quality infrastructure and a high quality environment	
	To improve the competitiveness of the rural economy	
	To promote the role of town centres as centres for sustainable development providing services, housing and employment, drawing on the principles of urban renaissance	
	To strengthen the Borough's retail offering in order to reduce outflow of retail spending	
	To encourage complementary hierarchy of retail centres and promote cohesive economic development	
15. To ensure local residents have employment opportunities and access to training [Employment & skills]	To encourage local provision of and access to jobs	<p>Would development of the site:</p> <ul style="list-style-type: none"> • encourage provision of jobs for local people? • enable local people to work near their homes? • encourage provision of local skills development and training?
	To reduce levels of out-commuting	
	To enable the provision of new and enhanced educational facilities	
	To provide training that will help people acquire the skills needed to find and remain in employment	

Appendix B Environmental and Sustainability Planning Context

Introduction

This appendix summarises the findings from the SA/SEA scoping stage on the environmental and sustainability planning context within which the new Local Plan will be developed. The information will be updated where necessary following the consultation on this Scoping Report.

The scoping process seeks to ensure that the SA/SEA encompasses the key sustainability issues relevant to the Borough in the context of the development plan system. This section provides the environmental and sustainability context by:

- Examining the relationship of the Local Plan with other policies, plans and programmes, to identify relevant environmental protection and sustainability objectives and to identify potential conflicts to be addressed within the plan-making process; and
- Assembling baseline data on the current and future state of the Borough across a range of environmental, social and economic topics which may be affected by the Local Plan.

This section also outlines the key issues arising from the policy context review and baseline analysis and is set out under the following broad topics:

- Environmental Factors
 - Biodiversity, including flora and fauna, and geodiversity;
 - Climatic Factors;
 - Air Quality;
 - Landscape and Townscape;
 - Cultural Heritage;
 - Material Assets;
 - Soil; and
 - Water.
- Social Factors
 - Population;
 - Health and Wellbeing;
 - Housing; and
 - Transport and accessibility.
- Economic Factors
 - Economy, employment and education

Each SEA/SA topic is structured under the following headings:

- **Policy Context** - a summary of the relevant policies, plans and programmes (PPPs) which are applicable to that topic. This includes the relevant core principle(s) from the National Planning Policy Framework (NPPF)¹.
- **The Current Situation** - the characteristics of Dacorum Borough and the surrounding area with respect to that particular topic, this is the baseline. It also draws on trends observed since the baseline prepared in 2011 for the SA/SEA of the Dacorum Core Strategy. Where there any sources of information missing which the appraisal could benefit from, these are identified.
- **The Likely Situation without the Plan** – this describes how the environmental, social and economic characteristics would change if no Local Plan were to be produced.
- **Issues and Opportunities** - a list of the various issues and opportunities facing Dacorum Borough and the surrounding area in relation to each SA/SEA topic.
- **Sustainability appraisal objectives** - taking into account all of the issues and opportunities identified for the topic, as well as an assessment of the relevant plans, policies and programmes, these are the objectives and sub-objectives which will be used when predicting and assessing the likely effects of implementing the various options considered during the development of the Local Plan.

¹ National Planning Policy Framework, Ministry of Housing, Communities and Local Government, 2019

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

Environmental Factors

B.1 Biodiversity, including flora and fauna, and Geodiversity

B.1.1 Key policy context

The NPPF requires that the planning system should seek to minimise the impacts on biodiversity and provide net gains in biodiversity where possible, thus contributing to the Government's commitment to halt the overall decline in biodiversity.

It goes on to say:

"In order to minimise the impacts on biodiversity and geodiversity, planning policies should in particular:

- plan for biodiversity at a landscape-scale across local authority boundaries;*
- identify and map components of the local ecological networks.;*
- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets and identify suitable indicators for monitoring biodiversity in the plan; and*
- aim to prevent harm to geological conservation interests."*

In 2011, the government published Biodiversity 2020: a strategy for England's wildlife and ecosystem services. This new biodiversity strategy for England built on the Natural Environment White Paper and provides a comprehensive picture of how the Government is implementing international and EU commitments. It sets out the strategic direction for biodiversity policy up to 2020.

In 2012 a new set of 24 national Biodiversity 2020 indicators (made up of 51 individual measures) was published, and this was reviewed and updated in 2015². Key findings from the latest assessment of these Biodiversity 2020 indicators of relevance to Dacorum were:

- In the short term, 33% of measures have shown an improvement and 22% have shown a deterioration (18% remained about the same);
- In the long term, 39% of measures have shown an improvement and 22% have shown a deterioration (8% remained about the same);
- Measures that have shown improvement both in the long and short term include: 'Sites of Special Scientific Interest in favourable condition'; 'percentage of species of European importance in favourable or improving conservation status'; 'removal of greenhouse gases by UK forests'; 'local sites under positive management'; and 'air pollution impacts on sensitive habitats: sulphur (acidity)'.

²

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492526/England_2015_full_publication.pdf

- Breeding farmland birds, butterflies of the wider countryside on farmland; and pollinating insects have all shown a decline over long and short time scales.

The 2016 State of Nature report was produced by a consortium of biodiversity organisations and highlights that biodiversity generally remains under pressure in the UK. The UK is ranked 189 out of 218 countries assessed, with 56% of UK species in decline. 109 species in the UK are considered critically endangered. On a local scale, the Hertfordshire Local Nature Partnership (LNP) Strategic Plan sets out six high level principles that are expected to be reflected when considering biodiversity and the natural environment:

1. Recognise the value of the natural environment and the range of benefits and services it provides;
2. Protect and enhance existing biodiversity assets;
3. Seek opportunities to improve habitat connectivity;
4. Integrate biodiversity opportunities within new development;
5. Make decisions informed by the best available ecological information and data; and
6. Secure the long term management of existing and new habitats/sites.

B.1.1.1 Relevant plans, policies and programmes

- (Wild) Birds Directive 2009/147/EC
- Habitats and Species Directive 92/43/EEC 1992
- Natural Environment and Rural Communities Act 2006
- The Wildlife and Countryside Act 1981 (as amended)
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services
- Natural Environment White Paper (2011, with updates to 2014). *'The Natural Choice: Securing the value of nature'*
- The UK Post-2010 Biodiversity Framework
- State of Nature 2016
- Hertfordshire Local Nature Partnership (LNP) Strategic Plan
- Hertfordshire Biodiversity Action Plan 2006
- Hertfordshire & Middlesex Wildlife Trust Strategic Plan 2011-2016
- Hertfordshire & Middlesex Wildlife Trust How to build a Living Landscape
- Hertfordshire Green Infrastructure Plan (March 2011)
- Hertfordshire County Council Rights of Way Improvement Plan 2017/18-2027/28 (2017)
- Thames River Basin Management Plan 2015 - 2021
- Thames Water Authority Land Drainage Byelaws 1981
- Dacorum Borough Council Green Space Strategy 2011
- Chilterns AONB Management Plan 2019-2024
- Urban Nature Conservation Study (March 2006)
- Green Arc Strategic Green Infrastructure Plan (March 2011)

- Dacorum Green Infrastructure Plan (March 2011)
- Dacorum Conservation Area Appraisals

B.1.2 The current situation

B.1.2.1 Designated sites

Dacorum Borough has a number of sites that have European or national designations for their biodiversity value. These are Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs).

Within Dacorum, the SAC (Special Area of Conservation) designation applies to two areas of Chiltern Beechwoods. The largest area is at Ashridge, with a smaller area on the western boundary of the Borough, around Stubbings Wood. The habitat is generally characterised by heath and scrub (4%), dry grassland (8%) and broad leaved deciduous woodland (88%). The main reason for the designation is the 'Asperulo-Fagetum beech forests' and the 'distinctive coralroot *Cardamine bulbifera*'. The occurrence of 'semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)' which is an important orchid habitat, is another reason for the designation as is the presence of the Stag beetle (*Lucanus cervus*).

Sites of Special Scientific Interest (SSSIs), as designated by Natural England (under the Wildlife and Countryside Act 1981), comprise land which is nationally important in terms of flora, fauna and geology. Table B.1-1 shows the sites within Dacorum which have been designated as SSSIs.

Table B.1-1: SSSI within or partially within Dacorum Borough

Site name	Interest	Area	Condition ³
Aldbury Nowers	Biological	19.79 ha	35% Favourable 65% Unfavourable – Recovering
Alpine Meadow, near Brick Kiln Cottage, Berkhamsted	Biological	0.79 ha	100% Favourable
Ashridge Common and Woods	Biological	626.41 ha	86% Favourable 14% Unfavourable – Recovering
Little Health Pit	Geological	1.21 ha	100% Favourable
Oddy Hill and Tring Park	Biological	36.01 ha	3% Favourable 97% Unfavourable - Recovering
Roughdown Common	Biological (with Earth Science Interest ⁴)	3.70 ha	100% Favourable
Tring Reservoirs	Biological	99.95 ha	98% Favourable 2% Unfavourable
Tring Woodlands	Biological	24.19 ha	100% Unfavourable - Recovering

³

<https://designatedsites.naturalengland.org.uk/ReportSiteExport.aspx?countyCode=21&ReportTitle=HERTFORDSHIRE>. Accessed 11 March 2017.

⁴ <http://www.hertsgeolsoc.org.uk/HertsRIGSMap2016-a.jpg>

Dacorum also has a number of Local Nature Reserves (LNRs), these being areas identified as having wildlife or geological features that are of special interest locally. In total, there are six LNRs, four managed by the Hertfordshire and Middlesex Wildlife Trust and the other two by Dacorum Borough Council and associated 'Friends' groups:

- Alpine Meadow (Wildlife Trust);
- Long Deans, Hemel Hempstead⁵ (Wildlife Trust);
- Wilstone Reservoir (Wildlife Trust);
- Shrub Hull Common Local Nature Reserve;
- Aldbury Nowers, Duchies Piece (Wildlife Trust); and
- Howe Grove Local Nature Reserve.

Wildlife Sites are the most important places for wildlife outside legally protected land such as Nature Reserves or Sites of Special Scientific Interest. In 2010 there were almost 2,000 Wildlife Sites in Hertfordshire, totalling 17,215ha, and covering over 10% of the county. They include meadows, ponds, woodland, urban green space and geological sites. There are 230 Wildlife Sites in the Borough.

There are also a number of Key Biodiversity Areas (KBAs) in Hertfordshire, these are nationally identified sites of global significance and represent an important approach to addressing biodiversity conservation at the site scale. Within Dacorum, regional Key Biodiversity Areas (KBA/Living Landscapes) include 'Ashridge / Berkhamsted Common / Aldbury', 'Tring Scarp and Dip Slope and Tring Reservoirs', and the 'River Chess Valley' (bordering with Three Rivers District). These areas also include clusters of Local Wildlife Sites, indicating their importance at a range of levels.

B.1.2.2 Area-wide Biodiversity

The Natural Environment White Paper (2011, with updates to 2014) recognises that nature conservation cannot be purely focussed on protecting designated sites. Such sites are too small and fragmented to safeguard the full range of habitats and species on their own. The White Paper therefore called for a much wider approach to reversing the long term decline in biodiversity by expanding and linking habitats to restore ecosystem funding.

Within Hertfordshire this has resulted in an 'Ecological Networks' project. The results of this work concluded that overall habitat network connectivity is currently very poor in Hertfordshire and as a result so is the ecosystem integrity and resilience.

"Hertfordshire has very little semi-natural habitat remaining and that existing habitat networks are highly fragmented and failing. Woodland makes up about 10% of the county area, which is over half the total remaining area of all habitats. However, even woodland networks are highly fragmented and only a small proportion of those sites are classed as ancient – those of the highest value. Heathland is our most threatened habitat, with only 13 ha remaining from roughly 5,000 ha in existence as recently as 175 years

⁵ Includes Bunkers Park

ago. Remaining fragments are now so small and fragmented that this unique habitat is in danger of being lost from Hertfordshire entirely.”⁶

The project did identify four strategic core areas that should be prioritised for habitat restoration and creation projects. These were: the chalk to the north of the County; the acid soils to the South; and the two main river catchments of the Lee and the Colne. Dacorum contains a chalk core area within its Chilterns landscape.

In addition to the designated sites in the Borough, an Urban Nature Conservation Study⁷ also identified areas of wildspace⁸ that are in close proximity or within the main settlements.

The key areas identified were:

- Gadebridge Park in Hemel Hempstead;
- the land around Longdean Meadow Nature Reserve;
- the land in the Bulbourne Valley, south of Chaulden;
- the land to the northern and southern settlement fringes of Bovingdon; and
- the northern part of Tring Park around the mansion and southern edge of Tring inside of the A41.

Other areas include the Wendover Arm of the Grand Union Canal and the gravel lakes and Priory site allotments at Kings Langley. At Berkhamsted, the woodlands on the southern edge of the town are identified as important, although the severance created by the A41 is an issue. In addition, the Urban Nature Conservation Study identifies areas of wildspace deficiency, including part of the green wedge north of Hammerfield, Hemel Hempstead.

The Dacorum Nature Conservation Strategy⁹ identifies eight priority habitats for conservation in the Borough:

- Lowland beech woods;
- Chalk rivers and associated wetland;
- Lowland acid grassland and heath;
- Lowland calcareous grassland;
- Ancient species rich hedgerows;
- Oak hornbeam woodland;
- Unimproved neutral grassland; and
- Urban habitats.

The River Bulbourne Restoration scheme which began in 2013 worked to restore a 1km stretch of the River Bulbourne at Box Moor, near Hemel Hempstead. The banks of the river were regraded and altered to increase flow velocity and also encourage vegetation growth

⁶ Herts & Middlesex Wildlife Trust (2014) Hertfordshire’s Ecological Networks
<http://www.hertswildlifetrust.org.uk/sites/default/files/files/Mapping%20project%20report%20-%20Final.pdf>

⁷ Dacorum Borough Council, Urban Nature Conservation Study, 2006

⁸ Areas of general biodiversity interest in addition to wildlife corridors and designated sites

⁹ (Herts and Middlesex Wildlife Trust, 2000)

and improve ecological value, including measures to encourage fish and other wildlife to thrive. The project successfully brought ecological benefits as well as reducing flood risk in the surrounding area¹⁰.

B.1.2.3 Species

A number of national species of conservation concern are found in Hertfordshire. These include the following UK priority species (short and middle list¹¹) where Hertfordshire can contribute to the achieving national target because these species are characteristic of the area:

Brown Hare	Turtle Dove	Stone Curlew*
Otter*	Stag Beetle*	Corn Bunting
Water Vole*	Thatch Moss	Reed Bunting
Grey Partridge	Cornflower*	Tree Sparrow*
Song Thrush*	Dormouse*	Great Crested Newt*
Bullfinch	Pipistrelle	White-clawed Crayfish*
Linnet	Bittern*	Shepherd's Needle
Spotted Flycatcher	Skylark	Corn Cleavers

Species which are locally rare, declining, threatened and are either high profile and/or locally distinctive are as follows:

Natterer's Bat*	River Water-dropwort*	Duke of Burgundy
Nightingale	Narrow-fruited Corn Salad	Silver-washed Fritillary
Water Rail	Great Pignut*	Corn Buttercup
Kingfisher	Green-winged Orchid	Corn Gromwell
Palmate Newt	Long-eared Owl	Ivy-leaved Water Crowfoot
Brown Hairstreak	Pochard	Pasqueflower*
Chalkhill Blue*	Hawfinch	Petty Whin
Grizzled Skipper*	Snipe	Snakes-head Fritillary
Corn Parsley	Small Blue	

Species marked with asterisks have Species Action Plans within Hertfordshire¹².

B.1.2.4 Woodland cover

Hertfordshire has a total area of woodland of 15,503 ha covering 9.5% of the county. This is slightly above the UK average of 7.7% but well below the overall woodland coverage in

¹⁰ <https://www.boxmoortrust.org.uk/river-bulbourne/> Accessed 13/10/20

¹¹ Short list species are the top priority species for conservation in the UK as identified in the UK Steering Group Report. Middle list species are of lesser, but still national conservation priority.

¹² http://www.hef.org.uk/nature/biodiversity_vision/chapter_03_habitat.pdf Accessed 13/10/20

continental Europe of 30%¹³. Quantified figures for woodland cover were not available for Dacorum.

There are 3,280 hectares of ancient semi natural woodland over 0.25 hectares in size in Hertfordshire (Hertfordshire Biodiversity Action Plan (BAP))¹⁴. In Dacorum, the ancient woodland was surveyed and an updated inventory prepared in 2012 as part of a wider survey of ancient woodland carried out for the whole of the Chilterns AONB area. The 2012 survey identified an area of 963 hectares of ancient woodland in the Borough (this being 192 ha more than the 771 hectares originally identified in 2002), making up 4.53% of the total area of woodland within the Borough. Of this, 652 hectares are classified as ‘ancient semi-natural woodland’ and 311 hectares as ‘ancient replanted woodland’. This total comprises 195 parcels of woodland¹⁵. The survey highlighted that 27% of ancient woodland sites in the Borough were affected by invasive species; 17% were being affected by ‘gardenisation’; and 16% were affected negatively by rubbish.

B.1.2.5 Green Infrastructure

‘Green Infrastructure’ is a network of protected sites, nature reserves, habitats, green spaces, waterways and green linkages that is integral to the health and quality of life of sustainable communities.

It brings a range of benefits, assisting with pollution control and flood management, improving the health and well-being of residents by providing space for leisure activities, reinforcing the character and identity of places, helping support renewable energy production, as well as having a positive impact upon social interaction.

Green infrastructure provides a setting for the Borough’s towns and villages, threading through and connecting them to the wider countryside. It contributes to the character of the area, helping to give Dacorum its strong sense of place and high quality environment, and is particularly important on the urban fringe, where it helps to soften the transition between urban and rural landscapes.

The high level green infrastructure network for Dacorum includes key landscape features, strategic wildlife corridors and areas of high biodiversity. Dacorum Borough enjoys a rich, diverse and often high quality natural environment. Key elements are chalk streams and river valleys, meadows, wetland and grazed pastures, dry chalk valleys and chalk landforms, woodlands and ancient woodlands, historic parklands and designed landscapes and farmland. It has a number of strategically significant and historic green infrastructure assets, such as the Ashridge Estate, Tring Park, the Marsworth Reservoirs complex and the Grand Union Canal. It

¹³ Forestry Commission (2002) "National Inventory of Woodland and Trees - County Report Hertfordshire", available at [http://www.forestry.gov.uk/pdf/hertfordshire.pdf/\\$FILE/hertfordshire.pdf](http://www.forestry.gov.uk/pdf/hertfordshire.pdf/$FILE/hertfordshire.pdf)

¹⁴ http://www.hef.org.uk/nature/biodiversity_vision/chapter_04_woodland.pdf Accessed 13/10/20

¹⁵

http://www.chilternsaonb.org/uploads/files/AboutTheChilterns/Woodlands/ANCIENT_WOODLAND_2012_AP_PENDIX_DACORUM.pdf Accessed 20/06/16

also has a historically important mid-20th century urban green infrastructure legacy in the ‘designed landscapes’ by Geoffrey Jellicoe at Hemel Hempstead New Town¹⁶.

B.1.2.6 Geodiversity

Geodiversity is the variety of rocks, fossils, minerals, natural processes, landforms and soils that underlie and determine the character of our landscape and environment¹⁷.

Within Hertfordshire there are 19 sites designated as Regionally Important Geological and Geomorphological Sites (RIGs), which are the most important places for geology and geomorphology outside statutorily protected land such as SSSIs. They are equivalent to local Wildlife Sites.

There are four sites currently designated as RIGs in Dacorum:

- Castle Hill, Berkhamsted (Hertfordshire Puddingstone- blocks relocated onto roadside verge);
- Hertfordshire Bourne Valley (Hydrogeological/Geomorphological site: Chalk valley with intermittent chalk stream);
- Moorend Farm Meadows (Geomorphological site showing features interpreted as naleds or icings); and
- Tring Park (Dendritic shallow periglacial dry valleys cut in Middle Chalk bench)¹⁸.

In Dacorum, Roughdown Common SSSI, whilst having been designated for its ‘Calcareous grassland – Lowland’ habitat, also has an Earth Science interest, as an old chalk quarry forms part of the site.

B.1.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for the protection and enhancement of biodiversity in the Borough, in particular through ‘Policy CS26 Green Infrastructure’. Without a new Local Plan the Core Strategy policies would still remain, along with the existing Development Management (DM) policies saved from the previous Local Plan, and therefore there would not be a policy vacuum in this area, meaning that biodiversity would remain protected. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that development, beyond that

¹⁶ Dacorum Green Infrastructure Plan (2011) http://www.dacorum.gov.uk/docs/default-source/planning-development/spar-11.08.05-greeninfrastructureplan_final_report_11_03_31.pdf?Status=Master&sfvrsn=0

¹⁷ <http://www.ukgap.org.uk/geodiversity.aspx>

¹⁸ <http://www.hertsgeolsoc.ology.org.uk/HGS%20RIGS%20&%20SSSIs%20For%20Website%203.pdf> Accessed 17/10/16

already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the biodiversity and geodiversity sensitivity of an area. Without the Local Plan any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not be the most appropriate in terms of their biodiversity sensitivity or their role in enhancing wider Green Infrastructure. Without a new Local Plan opportunities may be lost to plan at the strategic level for Green Infrastructure provision which could provide biodiversity enhancements. The DM policies in the new Local Plan will also update the current saved DM policies from the previous Local Plan to bring them up to date and fully consistent with the NPPF. Without this happening there might be gaps in the policy framework which could result in inappropriate development from a biodiversity / geodiversity stand-point.

B.1.4 Issues and opportunities

- Opportunities are to link the ‘Living Landscape’ areas of the Gade Valley and Berkhamsted Common, as well as to provide an appropriate landscape/ecological buffer to Ashridge in the face of planned growth of Hemel Hempstead. Transport corridors such as the A41 often represent key wildlife corridors and opportunities to provide enhanced habitat linkages.
- Ashridge SAC/SSSI, Tring Park, Tring Reservoirs and the Grand Union Canal are all reported to be experiencing visitor pressures. As the urban population increases, pressures on access to the countryside and these key attractions will increase¹⁹.
- Maintaining, restoring and expanding BAP habitats
- Enhancing Green Infrastructure at a local level and a strategic level with neighbouring authorities.
- Compensation for features lost to development where loss is completely unavoidable.
- Protection of existing networks of natural habitats including buffer areas, migration routes, stepping stones and landscape features of major importance for wildlife.
- Restoration of existing habitats and landscape features which could potentially be of major importance for wildlife, for example chalk river valleys like the River Bulbourne.
- Linking and connecting isolated and fragmented habitats, important species populations and landscape features through creation of wildlife corridor (greenway) networks.
- Promote the use of management agreements for designated sites, where this can be linked to development.
- The declining rural infrastructure of farming diversity (livestock farming, mixed farming and forestry activities) which helps to maintain the character of the landscape and its biodiversity may be negatively affected by development.

B.1.5 Sustainability appraisal objectives and sub-objectives

To protect, maintain and enhance biodiversity and geodiversity at all levels

- To protect, maintain and enhance designated wildlife and geological sites (international, national and local) and protected species to achieve favourable condition
- To help achieve targets set by the Biodiversity Action Plan (BAP)
- To support farming, forestry and countryside practices that enhance wider biodiversity and landscape quality by economically and socially valuable activities (e.g. grazing, coppicing, nature reserves)
- To manage woodlands and other habitats of value for biodiversity in a sustainable manner and protect them against conversion to other uses
- To recognise the social/environmental value and increase access to woodlands, wildlife & geological sites and green spaces particularly near/in urban areas, including encouraging people to come into contact with, understand, and enjoy nature
- To consider the effects of light pollution on night flying fauna
- To recognise the potential biodiversity value of brownfield land and identify appropriate mitigation measures
- To actively seek to promote ecological connectivity between existing greenspaces

B.2 Climatic factors

B.2.1 Key policy context

Within the EU, the 2030 Climate and Energy Framework sets out three targets to be achieved by the year 2030:

- To cut greenhouse gas emissions by at least 40% from 1990 levels²⁰;
- To have a renewable energy share of at least 27%²¹; and
- To improve energy efficiency by at least 27%²².

The 2015 Paris Agreement has the UK in a legally binding policy commitment to limit global warming to well below 2°C and the UK has produced a national climate action plan to help achieve this goal. Furthermore, in 2019 the UK legislated for net zero emissions by 2050²³. Net zero means any emissions would be balanced by schemes to offset an equivalent amount of greenhouse gases from the atmosphere, such as planting trees or using technology like carbon capture and storage.

The UK Low Carbon Transition Plan 2009 sets out the intention to produce 30% of the UK's electricity by renewable means by 2020.

The National Planning Policy Framework has a specific core planning principle relating to climate change: to *“support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.”*

The NPPF points to the key role of planning in reducing greenhouse gas emissions and adapting to climate change²⁴ as well as supporting the delivery of renewable and low carbon energy and infrastructure. In particular, it states that local planning authorities should *“support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning.”*

Ways in which local planning authorities should go about supporting the move to a low carbon future include:

- “avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should

²⁰ Binding target

²¹ Binding target

²² On the basis of the Energy Efficiency Directive, the European Council has endorsed an indicative energy savings target of 27% by 2030. This target will be reviewed in 2020 having in mind a 30% target.

²³ <https://www.gov.uk/government/news/uk-to-go-further-and-faster-to-tackle-climate-change>

²⁴ In line with the objectives and provisions of the Climate Change Act 2008.

be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

- can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.”

With regard to low carbon energy, the NPPF states that local planning authorities should recognise the responsibility of all communities to contribute to energy generation from renewable or low carbon sources. This should be demonstrated through:

- Provid[ing] a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
- identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for collocating potential heat customers and suppliers.

The NPPF requires that local authorities should set out strategic policies to deliver climate change adaptation as well as mitigation. The NPPF states that: *“Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures”*. It recommends that *“policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.”*

At a local level the Climate Change Strategic Framework for Hertfordshire identifies opportunities for addressing climate change in the county.

In 2019, Dacorum Borough Council along with many other UK councils, declared a climate emergency, meaning that the council has pledged to ensure all council activities are net carbon neutral by 2030, all services make the maximum possible impact in challenging the extent and causes of climate change, the new Local Plan will incorporate the maximum possible sustainability requirements, and all sectors of residents, businesses and communities will be engaged with.²⁵

B.2.1.1 Relevant plans, policies and programmes

- European Commission 2030 Climate and Energy Framework
- Roadmap for moving to a competitive low carbon economy in 2050
- Energy Roadmap 2050
- Renewed EU Sustainable Development Strategy 2006

²⁵ <https://www.dacorum.gov.uk/home/environment-street-care/climate-change>

- Directive to Promote Electricity from Renewable Energy (2001/77/EC)
- Climate Change Act 2008
- UK Climate Change Risk Assessment
- The National Adaptation Programme 2013
- Climate Resilient Infrastructure: Preparing for a Changing Climate 2011
- Overarching National Policy Statement for Energy (EN-1) (Jul 2011)
- National Policy Statement for Renewable Energy Infrastructure (EN-3) (Jul 2011)
- Climate Change Strategic Framework for Hertfordshire (2010)
- The Building Regulations (2010)
- Dacorum Borough Council Corporate Environmental Policy 2018/2019

B.2.2 *The current situation*

Dacorum has the third lowest carbon dioxide (CO₂) emissions per capita in Hertfordshire in 2018 (out of the 10 local authority areas). The CO₂ per capita emissions for Dacorum are lower than the Hertfordshire average as well as the regional, England and national (UK) averages (see Table B.2-1).

Per capita emissions in the Borough have shown an overall decline since 2009 (from 5.8t CO₂ per person to 4.2t CO₂ in 2018); however this includes slight increases between 2009 and 2010 and between 2011 and 2012. This follows the regional and national trends.

Table B.2-1: Per capita Local CO₂ emission estimates 2009-2018 (t CO₂ per person)²⁶

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dacorum	5.8	5.9	5.3	5.6	5.5	4.9	4.7	4.5	4.3	4.2
Hertfordshire	6.7	6.8	6.2	6.5	6.3	5.7	5.5	5.3	5.0	4.9
East of England	7.0	7.3	6.6	6.8	6.6	6.0	5.8	5.4	5.3	5.2
England	7.1	7.3	6.6	6.9	6.7	6.0	5.7	5.3	5.1	5.0
UK	7.3	7.5	6.8	7.1	6.9	6.3	6.9	6.5	6.3	6.1

In 2018, about 37% of emissions were produced from energy use (mainly electricity and gas) in Dacorum homes (compared with 40% in 2010 and 36% in 2014). The industry and commercial sector contributed about 24% of emissions (compared with 28% in 2010 and 24% in 2014). Transport contributed around 37% of emissions within the Borough (compared with

²⁶ DBEIS National Statistics (2020) UK local authority and regional carbon dioxide emissions national statistics: 2005-2018 <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2018> Accessed 13 October 2020

32% in 2010 and 38% in 2014). These were almost entirely attributed to road transport (99%)²⁷.

Domestic energy efficiency improved by 23% between 1996 and 2007²⁸. This compared to the Hertfordshire average of 19.9%.

Domestic gas and electricity use decreased in Dacorum between 2011 and 2015. Gas consumption fell from 859 GWh (gigawatt hour) in 2011 to 833 GWh in 2015 (although there was a decrease to 827 GWh in 2012 and an increase to 860 GWh in 2012) while electricity consumption fell from 266 GWh in 2011 to 262 GWh in 2015.

In the commercial sector, gas consumption was variable year on year between 2011 and 2015, but has seen an overall decrease from 223 GWh to 201 GWh. Electricity consumption has shown an increase year on year from 298 GWh in 2011 to 354 GWh in 2015²⁹. In Hertfordshire, consumption of electricity by the commercial sector increased over this period where gas consumption decreased.

The Council has identified through its annual monitoring that if all sustainability measures were implemented from energy efficiency, combined heat and power and renewable energy schemes currently monitored there would be a 24% reduction in CO₂ emissions. In contrast to 2013/14, in 2014/15, the majority of emissions savings were the result of renewable energy technologies (81% of maximum CO₂ savings). Over the same period, energy efficiencies had the smallest contribution to CO₂ savings (around 19% of maximum savings)^{30,31}.

B.2.2.1 Renewable energy

The Green Alliance Trust has estimated the capacity for renewable energy generation across England and Wales. In 2016, Dacorum generated 23,789 MWh of renewable energy per annum, placing it 244th out of 348 Local Authorities³². The breakdown of renewable energy sources in Dacorum is shown in **Figure B.2-1**.

²⁷ Figures calculated based on DBEIS National Statistics (2020) UK local authority and regional carbon dioxide emissions national statistics: 2005-2018 <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2018>

²⁸ Hertfordshire Renewable and Low Carbon Energy Technical Study (2010)

²⁹ <http://atlas.hertslis.org/IAS/profiles/profile?profileId=976&geoTypeId=16&geoids=26> Accessed 14 October 2020

³⁰ Dacorum Borough Council (2016) Delivering Success: Authority Monitoring Report & Success on the Dacorum Development Programme 2014/15

<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/monitoring-reports-and-land-position-statements>

³¹ NB: this information was not updated in the AMR for 2015/16 (published January 2017) or the AMR 2016/17 (published February 2018) as the Council no longer uses the C-Plan system from which this information was derived.

³² <https://renewablelocator.green-alliance.org.uk/area/88> Accessed 14 October 2020

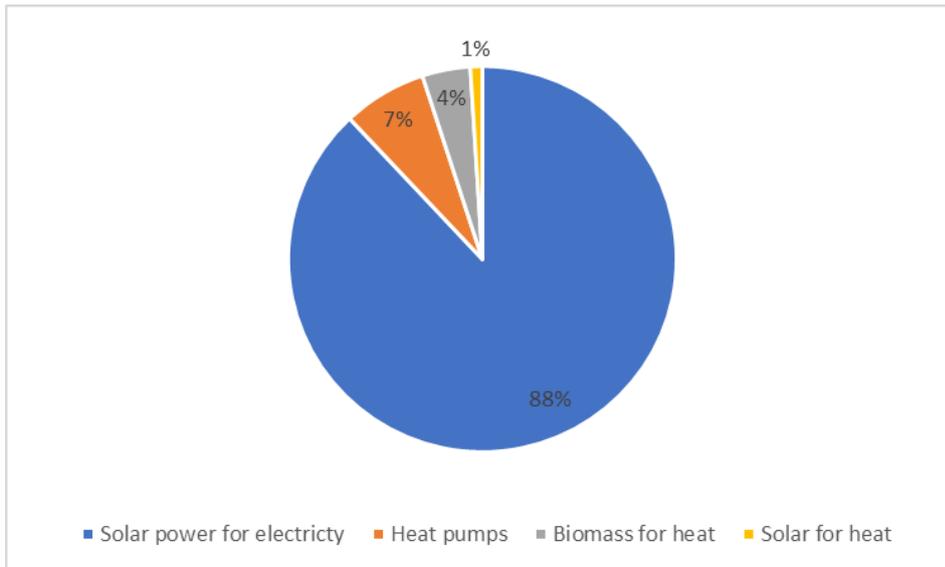


Figure B.2-1: Breakdown of renewable energy sources used in Dacorum in 2016³³

Dacorum has ranked best in terms of renewable energy capacity and generation compared with neighbouring Local Authorities.

Table B.2-2: Renewable Energy Generation & Capacity³⁴

	Capacity (MW)	Rank	Generation (MWh)	Rank
Dacorum	21.8	184	23,789	244
St Albans	7.1	286	10,370	290
Watford	3.1	327	6,424	309
Three Rivers	3.2	325	5,044	316
Hertsmere	3.1	329	4,585	321

B.2.2.2 *Effects of climate change*

Besides reducing greenhouse gas emissions to mitigate climate change, it is also important that local authorities adapt to the likely impacts. This is necessary since the climate is already changing and is likely to continue to do so for at least the next few decades.

³³ Figure created by author based on data at: <https://renewablelocator.green-alliance.org.uk/area/88> Accessed 14 October 2020

³⁴ The Green Alliance, Renewable Energy Locator, <https://renewablelocator.green-alliance.org.uk/area/374> Accessed 14 October 2020

The future climate in Hertfordshire is predicted to become warmer, with drier summers and wetter winters³⁵. By 2050, Hertfordshire could see a 17% increase in rainfall or snow in winter, with a 19% decrease in rainfall during the summer³⁶.

Future climate change is likely to have the following effects:

- Implications for agricultural practices, such as change in crops grown and season of activity;
- Threats to the natural environment and native biodiversity;
- Implications for human health;
- Risks and opportunities for local businesses;
- Opportunities for leisure and tourism sector;
- Weather-related disruption of transport system;
- New types of building design and existing buildings no longer being fit for purpose;
- Drought conditions and associated restrictions following prolonged dry periods; and
- Increased river and surface water flood risk³⁷ (this issue is of particular importance and is dealt with in the water section (Section B.8.2.3)).

B.2.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for reducing carbon emissions, in particular through ‘Policy CS28 Carbon emissions reductions’. Whilst climate change will continue to occur, the existing Core Strategy and new Local Plan need to help to reduce Dacorum’s contribution to this global issue. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan, and therefore there would not be a policy vacuum in this area, meaning that reductions in carbon emissions would still be sought in new developments and transport. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will have the opportunity to strengthen the policy framework in relation to emissions reduction and also for adaptation to the effects of climate change, through updated strategic and development management policies that could take into account new technological opportunities.

³⁵ <http://www.hertsdirect.org/docs/pdf/h/hccclimateriskassessment.pdf>

³⁶ Hertfordshire Building Futures toolkit, Climate Adaptation

³⁷ <http://atlas.hertslis.org/IAS/profiles/profile?profileId=973&geoTypeId=16&geoids=26>

B.2.4 *Issues and opportunities*

- Carbon emissions per capita for Dacorum are above the regional average but below the national average.
- The future climate in Hertfordshire is predicted to become warmer, with drier summers and wetter winters.
- The combined effects of climate change, population growth and development needs will increase pressures on the natural environment. These impacts must be reduced through the prudent use of natural resources, encouraging renewable energy production, the effective disposal of waste, the sustainable design of new development and careful land management.
- Development can help to mitigate and adapt to the impacts of climate change, through sustainable design and construction and reducing the need to travel, particularly by car.
- Climate change is likely to affect water resources (supply and demand), alter habitats, affect air quality and public health and increase flood risk and likelihood of drought conditions. These could all adversely impact upon the Borough's economy.
- Greenhouse gas emissions are likely to lead to significant climate changes which could have significant implications for other aspects of quality of life.
- Development proposals could exacerbate flooding elsewhere in catchment and this needs to be avoided by adopting the sequential approach to site selection advocated in the NPPF.
- Implement Sustainable Drainage Systems – porous surfaces, greenspace, wetlands, flood storage areas, urban forestry to help manage some of the effects from climate change.
- Opportunity to decrease greenhouse gas emissions through reduced reliance on the private car.

B.2.5 *Sustainability appraisal objectives and sub-objectives*

Reduce greenhouse gas emissions and adapt to the effects of climate

- To minimise greenhouse gas emissions (particularly CO₂) for instance through more energy efficient design and promoting carbon neutral development
- To enable the use of sustainable modes of transport
- To promote increased carbon sequestration e.g. through increases in vegetation cover
- To encourage technological development to provide clean and efficient use of resources
- To adopt lifestyle changes which help to mitigate and adapt to climate change, such as promoting water and energy efficiency (through for instance higher levels of home insulation)

- To promote the incorporation of renewable energy technology into all new developments
- To encourage positive attitudes towards renewable energy schemes (e.g. biomass and wind energy)
- To promote design measures which enable developments to withstand and accommodate the likely impacts and results of climate change (for instance through robust and weather resistant building structures)

B.3 Air Quality

B.3.1 Key policy context

The Environment Act 1995 requires Local Authorities to carry out annual reviews of air quality in their area. Air Quality is required to be assessed against objectives set out in the Air Quality (England) (Amendment) Regulations 2002. The National Air Quality Strategy (2007) provides a framework for air quality control through air quality management and air quality objectives that should be met at designated receptors.

The NPPF states that: *“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.”*.

B.3.1.1 Relevant plans, policies and programmes

- Directive 2008/50/EC and Directive 96/62/EC the 'Air Quality Framework Directive'
- The Environment Act 1995
- Air Quality (England) (Amendment) Regulations 2002
- National Air Quality Strategy (2007)
- The Air Quality Standards Regulations 2010
- Dacorum Borough Air Quality Action Plan 2015-2018
- 2020 Air Quality Annual Status Report

B.3.2 The current situation

Monitoring of air quality helps to ensure that levels of identified pollutants remain below national standards and targets so that human health and eco systems are protected. Identified pollutants include: Nitrogen oxides (NO_x); Nitrogen dioxide (NO₂); Particulate matter (PM₁₀); Sulphur dioxide (SO₂); Benzene; Carbon monoxide (CO); and 1, 3-butadiene.

The main source of air pollution within Dacorum Borough is generated from road traffic³⁸. The Council measure ambient NO₂ concentrations, PM₁₀ and PM_{2.5} using passive diffusion tubes at a total of 54 kerbside, roadside and background locations within the Borough. There is also one automatic monitoring station in the Borough located adjacent to Northchurch High Street.

³⁸ Dacorum BC Air Quality Action Plan 2015-2018

Three AQMAs have formally been declared within the Borough in relation to the annual mean air quality objective (annual mean standard of 40 µg/m³) for nitrogen dioxide:

- AQMA No 1 Lawn Lane, Hemel Hempstead,
- AQMA No 2 London Road, Apsley and
- AQMA No 3 High Street, Northchurch, Berkhamsted.

In 2020, for the second consecutive year, the Northchurch AQMA is demonstrating NO₂ concentrations below intervention limits, though the AQMA is unlikely to be revoked until this compliance is maintained for a further two to three years³⁹. At the AQMAs in Hemel Hempstead and Apsley, there were no exceedances outside the current AQMA boundaries therefore the boundaries remained the same. The Air Quality Action Plan 2015 – 2018 identifies that 155 residential properties are included within the three AQMAs (47 at Hemel Hempstead, 66 at Apsley and 42 at Northchurch)⁴⁰. Based on 2011 results, measures to address road transport emissions would need to reduce annual mean concentrations by 22.2, 17.3 and 7.3 µg/m³ in AQMAs 1, 2 and 3 respectively to achieve the air quality standard. Source apportionment studies have identified that ambient background concentrations contribute the largest individual proportion to existing NO₂ concentrations within all three AQMAs, followed by emissions from cars and LGVs on local roads.

The Council published their draft Air Quality Action Plan (AQAP) in 2014 which details measures planned to improve the air quality within the AQMAs as well as the Borough as a whole. The measures are principally targeted at reducing pollution from road traffic. Updates to this AQAP have been ongoing since 2019 and the council is creating a draft AQAP which replaces the previous plan and is set to run 2019-2024.

B.3.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for improving air quality, in particular through 'Policy CS32 Air, Soil and Water Quality'. Without a new Local Plan the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area, meaning that effects on air quality would still be considered when planning new developments. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will have the opportunity to strengthen the policy framework in relation to air quality through

³⁹ Dacorum Borough Council (2020). Air Quality Annual Status Report 2020.

⁴⁰ Dacorum Borough Council (2014). Air Quality Action Plan 2015-2018.

<http://www.dacorum.gov.uk/docs/default-source/environment-street-care/air-quality-action-plan-2014.pdf?sfvrsn=4>

updated strategic and development management policies. The new Local Plan will be able to ensure that development, beyond that already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the air quality related implications, not only in terms of ensuring that new development does not exacerbate air quality in those areas currently suffering from poor air quality, but also in terms of ensuring that sensitive developments (e.g. schools and residential homes) avoid been located in areas with poor air quality. Without the Local Plan any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not comply with these factors.

B.3.4 Issues and opportunities

- Whilst overall levels of pollutants have decreased across the Borough there are some areas where annual mean nitrogen dioxide concentrations continue to exceed the relevant Air Quality Objectives.
- Ensuring that potentially polluting processes incorporate pollution minimisation measures.
- Ensuring that potentially polluting developments are not located close to sensitive developments (e.g. care homes, schools etc.) or in areas of existing poor air quality.
- Ensuring that sensitive developments are not located in areas of poor air quality.
- Promoting the development of Green Travel Plans.
- Improving cycle and pedestrian routes and links and cycle parking facilities to encourage the use of non-motorised transport.
- Promoting low emission vehicles, such as through the provision of electric vehicle charging infrastructure.
- Reducing the need to travel through developing in sustainable locations

B.3.5 Sustainability appraisal objectives and sub-objectives

Achieve good air quality, especially in urban areas

- To reduce transport related air quality problems
- To ensure that development proposals do not make existing air quality problems worse and where possible improve the quality
- To avoid siting sensitive developments in areas with poor air quality
- To address existing or potential air quality problems

B.4 Landscape and Townscape

B.4.1 Key policy context

The European Landscape Convention (2000) aims to promote European landscape protection, management and planning and to organise European co-operation on landscape issues. The protection and enhancement of the countryside is often dealt with in conjunction with biodiversity issues, such as in the biodiversity strategy for England ‘Biodiversity 2020: A Strategy for England’s wildlife and ecosystem services’, or agricultural issues, such as farming schemes and subsidies. In addition, the Countryside and Rights of Way Act 2000 (CRoW) created a statutory right of access to open county and registered common land and provides the context for many accessibility issues in Britain.

The NPPF requires that local planning authorities should contribute to and enhance the local environment by:

- *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); and*
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.

In addition, the NPPF requires that:

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

Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.”

National Planning Policy Guidance has also been published on how local authorities should address light pollution. This Guidance sets out how the Government defines the link between lighting and planning and goes on to cover the factors that should be considered when assessing whether a development proposal might have implications for light pollution and its effects.

More locally, the Chilterns AONB Management Plan sets the framework for protecting and enhancing the Chilterns – an area of outstanding natural beauty lying partly in South West Hertfordshire.

B.4.1.1 Relevant plans, policies and programmes

- European Landscape Convention 2000
- National Parks and Access to the Countryside Act (1949)
- Countryside and Rights of Way Act (2000)
- Chilterns AONB Management Plan 2019-2024
- Noise Policy Statement for England 2010
- Green Belt Review Stage 1 (2013) (Dacorum, St Albans and Welwyn Hatfield)
- Green Belt Review Stage 2 and Landscape Appraisal (2016)
- Landscape Character Assessment for Dacorum (May 2004)
- Dacorum Borough Landscape Sensitivity Study (April 2020)

B.4.2 The current situation

B.4.2.1 Landscape character

England is sub-divided into 159 distinct natural areas, each with a unique combination of landscape, biodiversity, geodiversity, history and cultural and economic activity. These areas are referred to as 'National Character Areas' or 'Landscape Character Areas'. Dacorum is covered by two of these Landscape Character Areas, mostly by 'Area 110 Chilterns' which covers one third of the District. Whilst the character of the south eastern section has been eroded through 20th century development, much of the remainder is protected by its designation as an Area of Outstanding Natural Beauty (AONB). The north western tip of the Borough forms part of 'Area 88 Bedfordshire and Cambridgeshire Claylands' – an area known locally as Boarscroft Vale.

The Chilterns Area of Outstanding Natural Beauty (AONB) is one of the Borough's most important landscape 'assets'. It was designated for the natural beauty of its landscape and its natural and cultural heritage. The Chilterns Conservation Board identifies a number of qualities of the AONB which are relevant to the character of the landscape:

- **Panoramic Views** from and across the escarpment interwoven with intimate dipslope valleys and rolling fields.
- Nationally important concentrations of **chalk grassland**, extremely **diverse in flora and fauna**, and home to some **scarce and threatened species**.
- Significant **ancient hedgerows, hedgerow** and **field trees, orchards** and **parkland** weaving across **farmland** that covers approximately 60% of the chilterns.
- Relative **tranquillity** and **peace** on the doorstep of ten million people, with dark skies, unspoilt countryside and sense of remoteness.
- One of the most **wooded landscapes** in England with 23% woodland cover. 56% of the woodland is Ancient. ⁴¹

⁴¹ Chilterns AONB Management Plan 2019-2024

The Chilterns Conservation Board published its management plan for 2019-2024 which identified some key issues for the Chilterns including the capacity to attract greater visitor numbers, protecting sensitive areas and engaging the surrounding community to act as volunteers and stewards to care for the AONB⁴¹.

The Bedfordshire and Cambridgeshire Claylands are characterised by a gently undulating topography and plateau areas, divided by broad shallow valleys. It is predominantly an open and intensive arable landscape.

Hertfordshire County Council has conducted in depth work regarding local landscape character assessments⁴². It defined 'Hertfordshire Landscape Regions' which are based on what are now known as the 'Natural England National Character Areas' supplemented with some local refinements. It is anticipated that this information will be used to assess in more detail how local landscape character could be affected by the planning policies that will be proposed in the Local Plan. Thirty different Landscape Character Areas have been identified in the Landscape Character Assessment for Dacorum (2004).

Within Dacorum there is a regionally rare landscape type: the 'Wooded Chalk Valleys', mainly related to the dry valleys and seasonal winterbournes (such as the Bourne Gutter), associated with Gade, Bulbourne and Ver Valley systems. This landscape type covers 22.37% of the Borough (significantly this also represents 23.92% of the total regional distribution of the landscape type, which covers some 19,900 hectares in total). This landscape type also falls within the Chilterns Area of Outstanding Natural Beauty.

B.4.2.2 Green Belt

The Green Belt plays an important role in safeguarding the countryside from encroachment, preserving the setting and special character of the Borough's historic settlements and assisting in urban regeneration.

In Hertfordshire, an area of 84,640 hectares of land was designated as Green Belt, making up 51.5% of Hertfordshire⁴³. Of this, 10,630 hectares are within Dacorum Borough (in 2020)⁴⁴, making up 60% of Dacorum⁴⁵. There was no change in the Borough between 2019 and 2020. Between 2019 and 2020, England's Green Belt reduced by 3,520ha⁴⁶.

B.4.2.3 Tranquillity/light pollution

The East of England has been ranked as the second darkest region in England (after the South West) in the latest CPRE 'Night Blight' Report 2016⁴⁷. However, at the county level, only five

⁴² <http://www.hertsdirect.org/yrccouncil/hcc/env/enjoy/care/landscape/hlca/>

⁴³ Hertfordshire Quality of Life Report (2014)

⁴⁴ The Dacorum Core Strategy allocated six sites in the Green Belt (Local Allocations LA1-LA6) for a total of 1,630 new dwellings in the period 2006-2013.

⁴⁵ Dacorum Borough Council Draft Local Plan 2020

⁴⁶ Department for Communities and Local Government (2020) Local Authority Green Belt Statistics <https://www.gov.uk/government/statistics/local-authority-green-belt-statistics-for-england-2019-to-2020>
Accessed 14 October 2020

⁴⁷ http://nightblight.cpre.org.uk/images/resources/Night_Blight_cpre.pdf

counties in England have a lower percentage of dark skies than Hertfordshire, meaning that the county has relatively high levels of light pollution. Table B.4-1 shows that Hertfordshire has very little of the lowest light levels present (0.5% compared to 11% in the East of England), however it also has relatively low levels of the brightest light levels (1.2% compared to 0.6% in the East of England). The majority of light pollution within Hertfordshire is within the mid to low levels (colour bands 1-5).

Given that Dacorum is quite a rural Borough, the light pollution levels here are typically lower than surrounding Boroughs. Dacorum follows the same trends as Hertfordshire, in terms of night light pollution, with 65% within colour bands 1-4. Most of the darkest skies of the Borough fall within the Chilterns AONB, although there is also an area to the very northwest of the Borough closest to Long Marston that has darker skies than the AONB. The brightest skies are found to the south, around Maylands Business Park and Hemel Hempstead.

Table B.4-1: Levels of light pollution and dark skies split for Dacorum, Hertfordshire and East of England⁴⁸

Brightness values (NanoWatts)	East of England	Hertfordshire	Dacorum
Colour band 9 (> 32 (brightest))	0.6%	1.2%	1.3%
Colour band 8 (16 – 32)	1.8%	3.7%	3.5%
Colour band 7 (8 – 16)	3.3%	8.7%	6.6%
Colour band 6 (4 – 8)	4.6%	11.7%	10.5%
Colour band 5 (2 – 4)	7%	14.2%	13.0%
Colour band 4 (1 – 2)	12.3%	21.2%	30.3%
Colour band 3 (0.5 – 1)	24.4%	25.5%	33.7%
Colour band 2 (0.25 – 0.5)	35.3%	13.2%	1.1%
Colour band 1 (< 0.25 (darkest))	10.8%	0.5%	0.0%
Average Rank (where a rank of 1 has the darkest skies)	2/9 regions	36/41 counties	151/326 local authority areas

Since the 1960s ‘tranquil areas⁴⁹’ and ‘tranquil areas with some intrusion’, have been decreasing substantially in England, mainly due to new housing and infrastructure developments. These areas are identified in relation to their distances away roads, towns, airports and power stations. In 1960, about 54% of Hertfordshire was considered to be disturbed by noise and visual intrusion. This had increased to 69% in the early 1990s and by 2007 was estimated to be just under 76%⁵⁰. The least tranquil areas are around main urban areas, and particularly concentrated within the southwest of the County.

⁴⁸ Source: <http://nightblight.cpre.org.uk/maps/>

⁴⁹ Tranquil areas can be defined as: Places which are sufficiently far away from the visual or noise intrusion of development or traffic to be considered unspoilt by urban influences.

⁵⁰ Campaign to Protect Rural England (2007). England’s Fragmented Countryside: East of England- intrusion statistics. <http://www.cpre.org.uk/resources/countryside/tranquil-places/item/1761-englands-fragmented-countryside-east-of-england-intrusion-statistics>

From 2011, Hertfordshire County Council has run a night-time ‘street light switch-off’ scheme between 1am and 6am in all residential areas including towns and villages. Approximately 70% of the County’s street lights have been converted to operate for part of the night only with the remaining 30% kept on along A-roads, pavements and in known crime spots. This policy has saved approximately £1.4 million a year and contributes to substantial reductions in carbon output and upward light pollution⁵¹.

B.4.2.4 Noise pollution

Information relating to noise is reported under the ‘Health and Wellbeing topic. See Section B.10.2.4.

B.4.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for the protection and enhancement of the Borough’s landscapes and townscapes, in particular through ‘Policy CS5 Green Belt’, ‘Policy CS24 Chilterns AONB’, ‘Policy CS25 Landscape Character’ and Policies CS10-CS13 that cover settlement and site design and the public realm. Without a new Local Plan the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan, and therefore there would not be a policy vacuum in this area, meaning that landscape and townscape would remain protected. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that development, beyond that already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the sensitivity of an area in terms of landscape and townscape. Without the Local Plan any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not be the most appropriate. Also, without a new Local Plan, opportunities may be lost to plan at the strategic level for Green Infrastructure provision which could provide landscape enhancements. The DM policies in the new Local Plan will also update the current saved DM policies from the previous Local Plan to bring them up to date. Without this happening there might be gaps in the policy framework which could result in inappropriate development from a landscape/townscape stand-point.

B.4.4 Issues and opportunities

- There is increasing pressure on the landscape due to increased visitor numbers and increased access routes, pressure from development in areas surrounding the

⁵¹ Campaign to Protect Rural England (2014). ‘Shedding Light: a survey of local authority approaches to lighting in England’ <http://www.cpreherts.org.uk/campaigns/countryside/dark-skies/item/2298-shedding-light-and-seeing-stars>

Chilterns (including High Speed Two rail), increased water extraction due to population increases, loss of traditional farming practices such as grazing and the livestock sector, and influence of climate change.

- Light pollution is rapidly increasing and tranquillity is rapidly decreasing in the East of England. New lighting should be designed and selected that minimises light pollution.
- Ensuring that landscape proposals for development schemes reflect local landscape character.
- Ensuring that the character, diversity and local distinctiveness of all the landscapes of the Borough are maintained, enhanced or restored, in particular the Chilterns AONB.
- Preserve, and appropriately manage development within, the Green Belt
- Ensuring that access to landscape character areas is socially inclusive.
- The expansions of Luton and Heathrow Airport could lead to more noise related issues and complaints

B.4.5 Sustainability appraisal objectives and sub-objectives

To conserve and enhance landscape and townscape character and encourage local distinctiveness

- To protect and enhance landscape and townscape character
- To protect the purpose for which the Chilterns AONB is designated
- To evaluate the sensitivity of the landscape to new/inappropriate developments and avoid inappropriate developments in these areas
- To protect 'dark skies' from light pollution, and promote less invasive lighting sources while considering the balance between safety and environmental impacts
- To minimise the visual impact of new developments
- To encourage contribution of public art

B.5 Historic Environment

B.5.1 Key policy context

The European Spatial Development Perspective (1999) aims for balanced and sustainable development in the European Union. As part of that the conservation and management of natural resources and the cultural heritage is set out as one of three fundamental goals.

In the UK, the NPPF requires that local planning authorities should set out a positive strategy within their Local Plan, in relation to the conservation and enhancement of the historic environment and the opportunity for people to access and enjoy it. Local authorities should also recognise that heritage assets are irreplaceable. Paragraph 131 in particular states:

“in determining planning applications, local planning authorities should take account of:

The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;

The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and

The desirability of new development making a positive contribution to local character and distinctiveness.”

B.5.1.1 Relevant plans, policies and programmes

- European Spatial Development Perspective (1999)
- UNESCO World Heritage Convention (1972)
- European Landscape Convention (2000)
- The Convention for the Protection of the Architectural Heritage of Europe (1985)
- The European Convention on the Protection of Archaeological Heritage (1992)
- Ancient Monuments and Archaeological Areas Act (1990)
- Planning (Listed Buildings and Conservation Areas) Act (1990)
- The Enterprise and Regulatory Reform Act 2013
- The Government's Statement on the Historic Environment for England (2010)
- Heritage 2020: Strategic Priorities for England's Historic Environment 2015-2020
- Strategy for the Historic Environment: Heritage Counts (2014)
- Historic England Good Practice Advice in Planning Notes 1-3
- Historic England Advice Notes 1,2,3,4,7,8
- Dacorum Borough Council Conservation Strategy 2014-2019
- Dacorum Conservation Area Appraisals (Aldbury, Bovington, Chipperfield, Frithsden, Great Gaddesden, Nettleden, Berkhamsted, Hemel Hempstead.
- Hemel Hempstead Heritage Improvement Study (2012)
- Draft Dacorum Strategic Design Guide

B.5.2 *The current situation*

Historic features add tradition, continuity and character to a place, as well as being an asset for the economy, the environment and the wider community. Access to heritage assets, including building, monuments and historic parks and gardens is also linked to improved health and wellbeing. It is important that the setting of these heritage assets is preserved as much as possible as well as the assets themselves.

Dacorum's cultural heritage is a key feature of the Borough. The local authority area covers a large area of the old 'Hundred of Dacorum' which dates back to the Saxon period.

Many of the important heritage features and areas within Dacorum are recognised through historic environment designations. The National Heritage List for England⁵² lists a total of:

- 911 listed buildings in the Borough (consisting of 12 Grade I buildings, 59 Grade II* buildings and 839 Grade II buildings);
- 32 scheduled monuments; and
- 4 registered parks and gardens (consisting of one Grade II* - of exceptional historic interest at Ashridge; and three Grade II - of high historic interest at Tring Park, Markyate Cell Park and the Water Gardens, Hemel Hempstead)

There are also a number of locally listed Historic Parks and Gardens within the Borough as advised by the Hertfordshire Gardens Trust⁵³.

Figure B.5-1 shows the distribution of these heritage assets across the Borough, along with locally listed buildings and locally registered parks and gardens.

⁵² Historic England (2019) Local Authority Profiles 2019. <https://historicengland.org.uk/research/heritage-counts/indicator-data/> Accessed 28/10/20

⁵³ Dacorum Borough Council (2015) Looking after the environment, Site Allocations Background Issues Paper

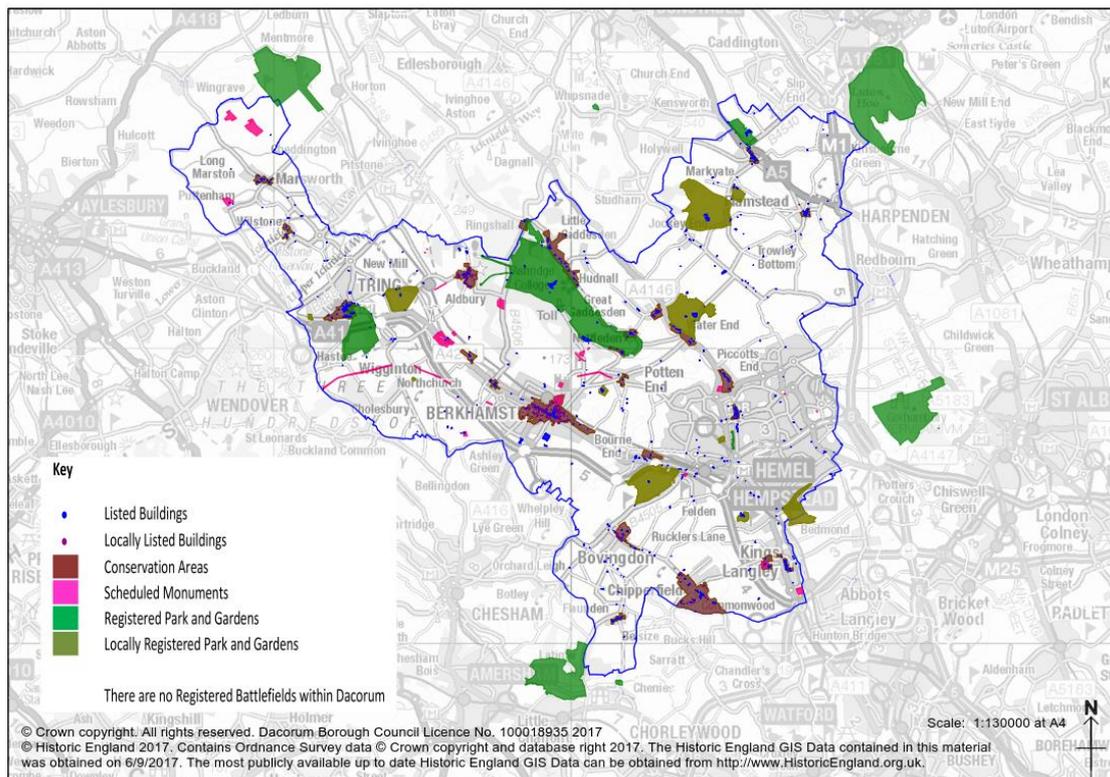


Figure B.5-1: Map showing features of the historic environment in Dacorum Borough

Although none of England’s historic battlefields or World Heritage Sites are located in Hertfordshire, two National Trust Properties can be found in the County: Ashridge Estate (in Dacorum) and Shaw's Corner (near Wheathampstead, in St. Albans City and District Council). The popularity of these places is in part due to their historic designed landscapes.

The Heritage at Risk Register 2020⁵⁴ contains two of Dacorum’s heritage features, as follows:

- **Church of St Leonard, Flamsted**, Grade I Listed Building. The building is described as being under repair or in fair to good repair, but has no user identified and is under threat of vacancy with no obvious new user.
- **The Grotto, the Tomb, and the Tunnel at Ashridge Management College**, Grade II* Listed Building. The assessment states that the structure is of immediate risk of further rapid deterioration.⁵⁴

Within Dacorum, there are also 61 Areas of Archaeological Significance (places of moderate or high archaeological potential)⁵⁵

The Borough also has extensive areas of surviving high quality historic landscapes. The variety is extremely high, with three of particular rarity in the Borough:

- Coaxial field systems (particularly around Gaddesden Row);

⁵⁴ <https://historicengland.org.uk/advice/heritage-at-risk/> Accessed 26 October 2020

⁵⁵ <https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/historic-environment-archaeology/archaeology-historic-environment.aspx>

- Iron age mining and settlements (beneath the woodlands at Ashridge); and
- Deserted Medieval landscapes (Boarscroft Vale).

Some areas, such as the National Trust’s Ashridge Estate are exceptionally well-preserved. Others, such as the Vale of Aylesbury and Chiltern dip-slope areas, although altered, still contain many elements of surviving past landscapes of prehistoric Roman, medieval and post-medieval date⁵⁶.

Ancient hedgerows are also a notable feature across Dacorum’s landscape, with surveys carried out around the area of Leverstock Green identifying up to 26 different species in existence and dating hedgerows back to the 11th Century⁵⁷. These make an important contribution to the character of the area and are historically important as indications of land use and previous ownership. They also contribute significantly to biodiversity. Hedgerows are considered to be important if they have existed for 30 years or more and meet criteria set out in the Hedgerow Regulations 1997⁵⁸.

B.5.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for the protection and enhancement of the Borough’s heritage assets and historic landscapes, in particular through ‘Policy CS27 Quality of the Historic Environment’. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan, and therefore there would not be a policy vacuum in this area, meaning that heritage assets and historic landscapes would remain protected. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that development, beyond that already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the sensitivity of an area in terms of heritage assets. Without the new Local Plan, any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not be the most appropriate. The DM policies in the new Local Plan will also update the current saved DM policies from the previous Local Plan to bring them up to date. Without this happening there might be gaps in the policy framework which could result in inappropriate development from a cultural heritage stand-point.

⁵⁶ Hertfordshire Historic Landscape Character Assessment (2004). Zones land according to its historic character and the likelihood that a particular area will contain historic landscape features

⁵⁷ <http://bacchronicle.homestead.com/Hedgerows.html> Accessed 22/08/17

⁵⁸ These criteria include: it marks a boundary between parishes existing before 1850; it marks an archaeological feature of a site that is a scheduled monument or noted on the Historic Environment Record; and it marks the boundary of a pre-1600 estate or manor or a field system pre-dating the Enclosure Acts.

B.5.4 *Issues and opportunities*

- The historic environment, including heritage assets, is under pressure from development and regeneration and associated traffic congestion, air quality and noise pollution. This puts heritage assets at risk of neglect or decay. The threat of infilling and replacement with new buildings and the erosion of historic features in the public realm need to be carefully mitigated and managed.
- Archaeological remains, both known and unknown have the potential to be affected by new development.
- Recognise the importance of cultural heritage and archaeological features and the importance of regenerating and re-using important buildings, particularly those listed as 'heritage at risk'.
- Be proactive in preparing development briefs to renew, restore and redevelop neglected and deteriorating sites of historic character.
- Ensure there are strong and robust design standards for new development.
- Ensure that new and existing developments have regard to settlement patterns, the local vernacular style and incorporate local materials.
- Ensure that the public realm is effectively designed using quality materials that maintain or add to the character/distinctiveness of an area.
- Recognise the importance of archaeological features and advocate a programme of archaeological investigation prior to initial earthworks.
- Retain features of historic landscape significance, where possible.
- The historic environment can make a significant contribution to the success of development. Opportunities to conserve and enhance the historic environment including designated and non-designated heritage assets and their settings should be sought where possible through sustainable development proposals.
- Development may result in significant loss or erosion of the landscape or townscape character or quality, which is likely to also have significant impact (direct and or indirect) upon the historic environment and people's enjoyment of it.

B.5.5 *Sustainability appraisal objectives and sub-objectives*

To identify, conserve and enhance the historic environment and heritage assets

- To safeguard and enhance the historic environment and restore historic character where appropriate, based on sound historical evidence
- To promote local distinctiveness by maintaining and restoring historic buildings and areas, encouraging the re-use of valued buildings and thoughtful high quality design in housing and mixed use developments – to a density which respects the local context and townscape character, and includes enhancement of the public realm
- To promote public education, enjoyment and access of the built heritage and archaeology

B.6 Material Assets

Material assets include resources such as land, building materials and other resources which are non-renewable. The topic is concerned with the efficient use of resources, including re-use of brownfield sites and sustainable waste management.

B.6.1 Key policy context

Legislation to reduce waste production, and to increase re-use, and recycling has been introduced with stringent targets, particularly for biodegradable waste, having been set by the European Union.

The UK National Planning Policy for Waste sets out detailed policies that should be taken into account when producing Local Plans. The Waste Management Plan for England (2013) sets out measures to make waste management in the UK more sustainable, such as decoupling waste from economic growth and promoting the composting of organic waste. An updated version of this plan is under consultation in 2020 but does not contain any new policies. Similarly, the Waste Prevention Programme for England (2013) sets out how the Government plans to reduce the amount of waste produced in the country and the process of transitioning towards a more resource efficient economy.

In terms of resource efficiency, renewable energy use and efficient use of land, the NPPF requires that local planning authorities should support the move to a low carbon future by:

“planning new developments in ways that “can help to reduce greenhouse gas emissions, such as through its location, orientation and design”;

“comply[ing] with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable” and “ensuring that “any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.”

The NPPF also emphasises the need to encourage the effective use of land by re-using previously developed land, provided that it is not of high environmental value.

On a regional level, the Hertfordshire Waste Local Plan 2011-2026 and the Hertfordshire Minerals Local Plan Review 2015 set out issues how to address waste issues locally.

B.6.1.1 Relevant plans, policies and programmes

- Landfill Directive 1999/31/EC
- Waste Framework Directive 2008/98/EC
- Waste Management Plan for England (2013)
- Waste Prevention Programme for England (2013)
- Urban Waste Water Treatment Directive 1991
- The Waste Strategy (2007)
- Hertfordshire Minerals Local Plan

- Hertfordshire Waste Local Plan
- Sustainable Community Strategy towards 2021 (2012)

B.6.2 *The current situation*

B.6.2.1 *Waste*

Hertfordshire County Council is the waste disposal authority and the minerals and waste planning authority for the County. Dacorum BC, meanwhile, is the waste collection authority with a statutory duty under the provisions of the Environmental Protection Act 1990 (as amended) to arrange for the collection of household waste in its area.

In Hertfordshire, overall waste produced decreased from 502,307 tonnes in 2013/14 to 493,559 tonnes of household waste being produced in 2015/16. In 2015/16, the most recent year for which data is available, Hertfordshire residents recycled 50.4% of their waste. Residual waste⁵⁹ was reduced by 8,000 tonnes and overall recycling was up 1,000 tonnes from the previous year, though organic waste has reduced. 152,131 tonnes of waste were sent to energy recovery facilities to produce electricity and heat, meaning less waste being sent to landfill⁶⁰.

For Dacorum Borough, waste produced per household remained relatively stable between 2010 and 2016. In the period 2014/5-2015/16 there was an overall reduction in waste of 24kg per property. In 2018/19 Dacorum BC collected a total of 54,479 tonnes of household waste and achieved a recycling/composting rate of 52.3% (25.3% recycling, 26.9% composting)⁶¹.

Whilst a long term solution to Hertfordshire’s growing residual waste disposal need is developed, in the short term, Hertfordshire’s residual waste will be disposed of at five Landfill or Energy Recovery Facilities (ERF):

- Westmill Landfill, just north of Ware (the only disposal location within Hertfordshire), which accepts residual waste from East Hertfordshire and waste from five of Hertfordshire’s 17 household waste recycling centres;
- The Ardley ERF in Oxfordshire, which has been accepting waste from the Waterdale Transfer Station since mid-2014;
- Milton Landfill, located in Cambridgeshire, which accepts a portion of North Hertfordshire’s residual waste;
- Bletchley Landfill, located in Buckinghamshire, which takes residual waste from both the privately operated Hitchin Transfer Station and the Waterdale Transfer Station; and

⁵⁹ Waste not reused, recycled or composted

⁶⁰ Hertfordshire Quality of Life Report (2017)

<http://atlas.hertslis.org/IAS/profiles/profile?profileId=961&geoTypeld=16&geolds=26> Accessed 15/10/20

⁶¹ ENV18 - Local authority collected waste: annual results tables <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables> Accessed 15/10/20

- Greatmoor ERF, near Calvert in Buckinghamshire opened in June 2016, and is due to take residual waste from Hertfordshire, that would have previously gone to Bletchley Landfill⁶².

These arrangements, whilst indicating a move from the use of landfill sites to ERF, demonstrate that Hertfordshire has a lack of in-county disposal options and a need for increased waste transfer by road to access regional facilities.

B.6.2.2 Waste water and sewage

Thames Water covers most of Hertfordshire's drainage catchment split into two main catchments, each with a sewage treatment works (STW). In the east is Rye Meads STW (near Ware) and to the west is Maple Lodge STW located in Rickmansworth. The Maple Lodge site serves Hemel Hempstead along with St Albans and Watford. Maple Lodge is expected to have capacity issues going forward from 2016 and therefore requires capital investment to increase capacity in the future to meet growing demand⁶³.

Within the more rural areas, sewage works can be found on the edge of the towns of Tring (Tringford Road), Berkhamsted (Bullbeggars Lane) and some are more scattered around the countryside (e.g. at Windmill Road, near Markyate, and Shantock Lane). There are pumping stations at Friars Wash, Little Tring, and covered reservoirs on the outskirts of Hemel Hempstead (Bourne End Lane, Berkhamsted Road)⁶⁴.

B.6.2.3 Land use

In Hertfordshire, there are conflicting pressures on land use. This is particularly true for housing and associated infrastructure which has to be balanced with the protection of the natural environment⁶⁵, as well as the preservation of the Green Belt

To achieve both the more efficient use of previously developed land (PDL) and the reduction of development pressures on undeveloped land (greenfield sites and Metropolitan Green Belt land), in 1998 the government set a target that 60% of all new developments should be built on brownfield sites.

Dacorum continues to exceed that target, with 87% (gross) of all dwellings (86% net) being completed on previously developed land (PDL) in 2015. This is an improvement on the previous year's figures (72% gross and 70% net) and those in 2013 (50% gross and 41% net). However, previous high levels of performance (90%+) are unlikely be repeated in the future

⁶² Hertfordshire Quality of Life Report (2014)

<http://atlas.herts.gov.uk/IAS/profiles/profile?profileId=961&geoTypeld=16&geoids=26>

⁶³ Watford Borough Council (2013) Infrastructure Delivery Plan: <https://watford.jdi-consult.net/documents/pdfs5/Infrastructure%20Delivery%20Plan.pdf>

⁶⁴ <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/cs31-emerging-core-strategy---june-2009---spatial-strat-for-the-countryside.pdf?sfvrsn=0>

⁶⁵ HEF (2004) "Quality of Life Report 2004", available at <http://www.hertsdirect.org/infobase/docs/pdfstore/qol4.pdf>

as the PDL resource in the built-up areas depletes⁶⁶. This will lead to greater pressure to build on greenfield sites.

In 2014/2015, there were high levels of new build completions and finally completed schemes with densities over 30 dwellings per hectare and above - relating to the tendency to build high density flatted developments on brownfield, urban sites. This is a modest increase in both cases on the position during 2013/14.

B.6.2.4 Aggregates and minerals

Hertfordshire's geology is primarily chalk bedrock from the Cretaceous period, with a covering of London Clay in the south and the east of the County. In the very north and northwest of the County there are some small areas of Gault Clay. Lying on top of the bedrock, there are superficial deposits of Clay-with-flints covering a large proportion of west Hertfordshire, including the Chilterns dip slope. Boulder clay can be found in central and east Hertfordshire, while there are gravel deposits in the Vale of St Albans and the river valleys⁶⁷.

Sand and gravel is the most commonly worked mineral in Hertfordshire, with land-won sand and gravel providing the only source of soft sand and sharp sand. The sand and gravel resources are found in most parts of the County, although they are particularly concentrated in a belt sitting across the southern half of the County (south of a line between Bishop Stortford in the east and Hemel Hempstead in the west). This area entirely covers the local authority areas of Watford, Three Rivers, Hertsmere, Welwyn Hatfield and Broxbourne. Large parts of St Albans and East Hertfordshire are also covered along with a small part of Dacorum⁶⁸.

Soft sand is relatively scarce within Hertfordshire and is concentrated within a small number of areas, meaning that the County in general has to import this resource from elsewhere; however sharp sand and gravel are more widely distributed across Hertfordshire⁶⁹. Gravel deposits are found within the river valleys of the Mimram, Ver and Colne around St Albans and Hemel Hempstead, although resources at the Ver and Colne have mostly been exhausted⁷⁰.

Currently there are four quarries extracting sand and gravel in Hertfordshire:

- Panshanger Quarry, Hertford
- Tyttenhanger Quarry, Colney Heath;
- Westmill Quarry, Ware;

⁶⁶ Dacorum Borough Council (2017) Delivering Success: Authority Monitoring Report & Success on the Dacorum Development Programme 2015/16

<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/monitoring-reports-and-land-position-statements>

⁶⁷ Biodiversity Action Plan for Hertfordshire 2006, www.hef.org.uk

⁶⁸ Hertfordshire Minerals Planning (2015) 'Local Aggregate Assessment' <http://www.hertfordshire.gov.uk/docs/pdf/l/locaggass2015.pdf>

⁶⁹ Hertfordshire County Council (2014) 'Sand and Gravel in Hertfordshire Frequently Asked Questions' <http://www.hertfordshire.gov.uk/docs/pdf/h/18857322/Sndandgrvlinhertsfaqs.pdf>

⁷⁰ Hertfordshire Minerals Planning (2015) 'Local Aggregate Assessment' <http://www.hertfordshire.gov.uk/docs/pdf/l/locaggass2015.pdf>

- Hatfield Quarry with the linked Symondshyde extraction site.

The Local Aggregates Assessment (2015) reported that extraction is steadily continuing at active sand and gravel sites in Hertfordshire; however the County's reserves are showing a steady decline. There are currently two other inactive sites within the County. Permitted reserves in Hertfordshire are estimated to be able to supply aggregate for a period of 11.3 years based on the County's current apportionment of 1.39 million tonnes⁷¹.

There are three chalk quarries located within Hertfordshire (Codicote Quarry, Bedwell Park just outside Hertford, and Anstey Chalk Pit). In the past, there were many chalk extraction sites, primarily for local use, however the scale of extraction has significantly decreased to just these sites. The chalk is now extracted for use in agriculture within and outside the County⁷².

There is one brick clay quarry at Bovingdon in Dacorum, where Hertfordshire's sole worked deposit of clay is located close to Hemel Hempstead⁷³.

There is no hard rock found within Hertfordshire and as a result the County imports crushed rock via the rail aggregate depots located at:

- Langley Sidings, Stevenage;
- Rye House, Hoddesdon;
- Harper Lane, Radlett;
- Orphanage Road, Watford; and
- Hitchin⁷⁴.

Extracting primary resources can cause a variety of impacts which could potentially be avoided by using secondary or recycled materials.

In Hertfordshire recycled and secondary aggregate processing increased from 78,390 tonnes in 2004 (this being 7% of total aggregate production) to 329,457 tonnes in 2013 (22.5%)⁷⁵.

B.6.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for the sustainable use of resources, in particular through 'Policy CS29 Sustainable Design and Construction'. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum

⁷¹ Hertfordshire Minerals Planning (2015) 'Local Aggregate Assessment'
<http://www.hertfordshire.gov.uk/docs/pdf/l/locaggass2015.pdf>

⁷² Hertfordshire Minerals Planning (2015) 'Local Aggregate Assessment'
<http://www.hertfordshire.gov.uk/docs/pdf/l/locaggass2015.pdf>

⁷³ Hertfordshire County Council (2014) 'Chalk and Clay in Hertfordshire Frequently Asked Questions'
<http://www.hertfordshire.gov.uk/docs/pdf/h/18857322/Chlkandclyinhertsfaqs.pdf>

⁷⁴ Hertfordshire Minerals Planning (2015) 'Local Aggregate Assessment'
<http://www.hertfordshire.gov.uk/docs/pdf/l/locaggass2015.pdf>

⁷⁵ Hertfordshire County Council Secondary and Recycled Aggregates Topic Paper (March 2015)
<http://www.hertfordshire.gov.uk/docs/pdf/h/18857322/topicpapsecandrecyaggreg.pdf>

in this area, meaning that resource efficiency would still be considered when planning new developments. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will have the opportunity to strengthen the policy framework in relation to resource use through updated strategic and DM policies. It should be noted that planning for minerals and waste is undertaken at a county level and therefore the Local Plan has limited influence at the strategic level for these two topics.

B.6.4 Issues and opportunities

- Waste production and disposal is a growing problem. Production of waste and disposal of this waste is becoming increasingly difficult, with diminishing numbers of suitable sites for landfill disposal. Hertfordshire as a county is having to use sites in Buckinghamshire and Oxfordshire in order to meet its needs. There is however, an increasing move towards Energy Recovery Facilities (ERF) facilities rather than landfill.
- There is the opportunity to promote the use of renewable resources, protect natural resources and reduce waste.
- Previously developed land is a finite source that is being depleted over time. This will put greater pressure to build on greenfield sites and to increase housing densities on these sites.
- Supporting a reduction in the amount of waste deposited in landfill.
- Supporting alternative methods of waste management, e.g. minimisation and recycling by incorporating facilities within development schemes.
- Encouraging re-use and recycling of construction waste in development schemes through the use of planning conditions.
- Promoting development on previously developed land and maximise the efficient use of land.
- Avoiding the sterilisation of mineral resources.

B.6.5 Sustainability appraisal objectives and sub-objectives

To use natural resources, both finite and renewable, as efficiently as possible, and re-use finite resources or recycled alternatives wherever possible

- To encourage maximum efficiency and appropriate use of materials, particularly from local and regional sources, using sustainable design and construction techniques
- To encourage new developments to incorporate renewable, secondary, locally sustainably sourced or materials of lower environmental impact in buildings and infrastructure

- To safeguard reserves of exploitable minerals from sterilisation by other developments
- To increase recycling and composting rates and encourage easily accessible recycling systems as part of new developments
- To promote all developments and occupants to minimise waste and optimise the recovery and recycling of waste.

B.7 Soil

B.7.1 Key policy context

When compared to the higher profile environmental issues, such as climate change and loss of biodiversity, impacts on soil are less well reported. This is despite the fact that soil is the foundation of the environment, landscape, wildlife and food production. Nevertheless, at the European level the EU 7th Environment Action Programme highlights soil degradation as a serious challenge with the requirement to increase efforts to reduce soil erosion and increase soil organic matter, and to remediate contaminated sites.

The National Planning Policy Framework requires that local authorities should *“take into account the economic and other benefits of the best and most versatile agricultural land”* and where it is necessary to have significant development on agricultural land, they *“should seek to use areas of poorer quality land in preference to that of a higher quality”*.

The NPPF also emphasises the role of the planning system in contributing to and enhancing the natural and local environment by *“preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”*.

The Planning Practice Guidance on Minerals advises mineral planning authorities how to balance best social, economic and environmental issues related to mineral and aggregates extraction which can impact on soil. The Soil Strategy for England has a vision to ensure that England’s soils will be protected and managed to optimise the varied functions that soils perform for society.

B.7.1.1 Relevant plans, policies and programmes

- The European Soil Thematic Strategy (2006)
- Safeguarding our Soils: A Strategy for England (2009)
- Rural Strategy (2004), Defra

B.7.2 The current situation

The geology of the County is the major factor determining its topography (the hills and valleys) and its soils. These, together with the climate, determine the natural vegetation and habitats which support the range of species and influence farming practices. The combination of all these factors results in the distinctive landscape of each part of the County.

The solid geology of Hertfordshire is relatively simple, being largely chalk of the Cretaceous period, overlain in the south and east by London Clay. In the far north and north-west of the County are small areas of Gault Clay. Throughout much of the County, the superficial deposits which overlay the solid geology complicate the picture. These include the Clay-with-flints of

much of west Hertfordshire, including the Chilterns dip slope; the boulder clay of central and east Hertfordshire; and the gravels of the Vale of St Albans and the river valleys⁷⁶.

South-west Hertfordshire's soils are mainly classified as grade 3 agricultural land, with some grade 2 soils⁷⁷. A significant proportion is covered by urban areas; a fact it has in common with many areas in the London Arc.

Dacorum Borough covers a number of different soilscapes. The predominant soilscape is 'slightly acid loamy and clayey soils with impeded drainage', which has moderate to high fertility. Farmed land is vulnerable to pollution run-off and rapid through-flow to streams; with the potential to trigger erosion of fine sediment through surface capping. In the west of the Borough, some areas of soil are also freely draining slightly acid but base rich soils which generally have high fertility. These are typically arable and grassland (when not in an urban area) and are vulnerable to groundwater contamination. To the west of Hemel Hempstead there is an area of freely draining lime-rich loamy soils and to the very north west of the Borough, around Tring, there are shallow lime rich soils over chalk or limestone, which are freely draining and vulnerable to leaching of nitrate and pesticides into groundwater particular given the arable and grassland land cover⁷⁸.

Major impacts on soil are soil loss, contamination or compaction which can stem from a variety of sources, such as⁷⁹:

- Erosion;
- New developments (e.g. housing and accompanying infrastructure);
- Nutrient loss and diffuse pollution from agriculture;
- Climate change;
- Air pollution and run-off from roads; and,
- Quarrying.

In recent years, Dacorum has seen a number of sinkholes appearing; a result of the predominantly chalk geology.

B.7.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for maintaining soil quality and remediating contaminated land, in particular through 'Policy CS32 Air, Soil and Water Quality'. Without a new Local Plan the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area, meaning that effects on soils would still be considered when planning new developments. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national

⁷⁶ http://www.hef.org.uk/nature/biodiversity_vision/chapter_02_geology.pdf

⁷⁷ Natural England (2010) Agricultural Land Classification map Eastern Region(ALC008) <http://publications.naturalengland.org.uk/publication/127056?category=5954148537204736>

⁷⁸ <http://www.landis.org.uk/soilscales/index.cfm#> Accessed 17/10/16

⁷⁹ <http://www.landis.org.uk/soilscales/index.cfm#>

policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will have the opportunity to strengthen the policy framework in relation to safeguarding soils and remediating contaminated land through updated strategic and DM policies. The new Local Plan will be able to ensure that development, beyond that already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the soil quality related implications (e.g. whether best and most versatile agricultural land could be affected and whether opportunities are taken to remediate contaminated sites). Without the new Local Plan, any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not result in the best outcomes in relation to these factors.

B.7.4 Issues and opportunities

- Protecting the best and most versatile agricultural land.
- Promoting good soil handling practices.
- Encouraging development on previously developed land.

B.7.5 Sustainability appraisal objectives and sub-objectives

Make efficient use of land and protect soils

- To safeguard high quality soils, such as agricultural land grades 1, 2 and 3a,) from development
- To limit contamination/degradation/loss of soils due to development
- To concentrate new developments on previously developed land (PDL)
- To minimise use of greenfield sites for development
- To optimise the efficient use of land by measures such as higher densities and mixed use developments
- To encourage the remediation of contaminated and derelict land and buildings

B.8 Water

B.8.1 Key policy context

The EU Water Framework Directive 2000/60/EC is the key regulation that governs all UK water policies via the Water Framework Regulations 2003. The main aim of the directive is to prevent deterioration and where possible improve the quality of rivers and other water bodies to 'good ecological status' and 'good chemical status' by 2015 or at the latest, by 2027. There is also the requirement for groundwater to have reached 'good status' in terms of quality and quantity by 2015 or at the latest, by 2027.

In the UK, there are national and regional strategies which focus on maintaining and protecting water resources. Dacorum Borough is covered within the following plans:

- Thames Water 'Water Resource Management Plan 2019',
- Thames River Basin Management Plan (2015-2021),
- Thames Catchment Flood Management Plan (2009)
- The Colne Catchment Abstraction Licensing Strategy (2013)

Flood risk should be considered at all stages of planning and development in order to reduce risk to properties and people. The NPPF requires that local authorities take account of flood risk throughout the planning process to avoid inappropriate development in areas at risk of flooding. This involves carrying out a Strategic Flood Risk Assessment to inform planning policies.

A Strategic Flood Risk Assessment covering Dacorum BC, St Albans City & District Council, Three Rivers DC and Watford BC (2007) identifies areas that are at risk from flooding. Updates for Dacorum were provided in the Draft Strategic Flood Risk Assessment Level 2 in 2020. A Water Cycle Scoping Study was undertaken in 2010 (covering the same four local authorities, but in addition Welwyn and Hatfield BC) to inform the preparation of Local Plans and provide evidence to support any policies that relate to water resources, supply and sewerage, wastewater treatment, flood risk, water quality and the wider water environment. The 'Hertfordshire Water Study 2017' identifies that the availability of water resources in Dacorum is "largely sufficient for 2021 but could require significant improvement by 2051, as with much of the county".

In terms of waste water treatment capacity the Study identified that the main outcomes from the evaluation of need for Dacorum were as follows: "Any development within the Upper Gade catchment by 2031, northwest of Hemel Hempstead, could significantly impact water quality and require sensitive planning; The indicative development areas around Berkhamsted are likely to require strategic intervention from 2031 onwards to accommodate the scale of projected growth within the Berkhamsted STW catchment; 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 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; and Focusing growth

proposals on Hemel Hempstead could provide a greater number of unrestricted opportunities, utilising the capacity of the existing system and relieving pressure on Berkhamsted.”⁸⁰

B.8.1.1 Relevant plans, policies and programmes

- Water Framework Directive 2000/60/EC
- The EU Floods Directive 2007/60/EC
- Nitrates Directive 91/676/EC (and Protection of Water against Agricultural Nitrate Pollution (England and Wales) Regulations 1996, SI 888)
- Water Framework Regulations 2003
- The Water Act 2014
- The Flood and Water Management Act 2010
- Water Industry Act 1991 (as amended)
- Groundwater Protection: Policy and Practice (Environment Agency, 2012)
- The Environmental Permitting (England and Wales) Regulations 2010
- Thames Water Authority Land Drainage Byelaws 1981
- Local Flood Risk Management Strategy for Hertfordshire 2019-2029
- Water Cycle Study 2010
- Hertfordshire Water Study (2017) Stage 1
- Strategic Flood Risk Assessment Level 1 (2019) and Level 2 (expected 2020)
- Dacorum Draft Strategic Flood Risk Assessment Level 2 (2020)
- Thames River Basin Management Plan 2016 (updated 2018)

B.8.2 The current situation

B.8.2.1 Water quality

Water is an essential natural resource. It is important that water resources are protected so that the risk of harm to the environment and to human health can be reduced as far as possible. Dacorum lies primarily within the River Colne catchment. The Grand Union Canal runs throughout the catchment and is connected with the rivers Bulbourne, Gade and Colne⁸¹ while the River Ver flows further to the north east of the Borough. In the 2009 assessments as part of the Thames River Basin Management Plan, the confluence of the Upper Gade with the River Bulbourne was classified as having a bad ecological status⁸². In the 2018 update to

⁸⁰ Hertfordshire Water Study 2017: Infrastructure & Resources, Sub-catchment Solutions (2021 – 2051), ARCADIS, March 2017

⁸¹ <http://www.catchmentbasedapproach.org/thames/colne>

⁸² Thames River Basin Management Plan (2009)

the Thames River Basin Management Plan, Affinity Water pledged to invest over £2million to improve river improvements in the Colne catchment⁸³.

In 2015, following the second cycle of River Basin Management Plans, the Environment Agency reported that of the 26 surface water bodies in the Colne catchment, 20 were of 'Moderate' Ecological Status, 4 were 'Poor' and two were 'Bad'. All 26 water bodies had a Good Chemical Status⁸⁴.

The main reasons for not achieving good status within the Colne catchment, by sector, were:

- Water industry
- Urban and transport
- Agriculture and rural land management.

The majority of the rivers in the Colne catchment are susceptible to low flows due to low groundwater levels, which are increasingly exacerbated by drought conditions and abstractions.

The Thames River Basin Management Plan identifies the priority issues for the Colne catchment as: changes to natural level and flow of water; pollution from waste water, transport infrastructure and rural areas; and the extent of physical modifications such as weirs and concrete channels⁸⁵.

Within Dacorum, the main rivers are the Gade and the Bulbourne. The River Gade rises in the Chilterns, near the hamlet of Hudnall and flows south east for 15 miles through Great Gaddesden, Hemel Hempstead, Kings Langley and Abbots Langley to join the Colne near Rickmansworth. The River Bulbourne rises at Cow Roast, north-west of Berkhamsted and flows for 6 miles to join the Gade at Hemel Hempstead⁸⁶.

Groundwater in the Colne Catchment is of great importance as it is used to supply drinking water, as well as providing base flow into some rivers via springs. The three main groundwater bodies in the Colne Catchment are the 'Mid-Chilterns Chalk' (which is of Poor Chemical Status), 'the 'Radlett Tertiaries' and the 'Lower Thames Gravels' (both at Good Chemical Status). However, all three groundwater bodies are classified as being at risk as they are very susceptible to contamination.

One of the main ways the water industry impacts on water quality in the Colne catchment is through the discharge of treated water into local rivers from 2,000 residential properties and six large STWs. During storm events, there can be intermittent sewage discharged (under license), impacting on groundwater, which has the potential to put the drinking water supply at risk⁸⁷.

⁸³ Thames River Basin Management Plan (2018)

⁸⁴ <http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3096/Summary>

⁸⁵ Thames River Basin Management Plan (2015)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500548/Thames_RBD_Part_1_river_basin_management_plan.pdf

⁸⁶ <http://www.colnecan.org.uk/index.php/the-action-plans/rivers-gade-and-bulbourne/rivers-gade-and-bulbourne-projects>

⁸⁷ <http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3096/Summary>

The town of Tring and notably the Tring Reservoirs (SSSI) lie in the Thames and South Chilterns catchment just to the west of the Colne Catchment. The water quality in this catchment is generally good.⁸⁸ There are eight Drinking Water Protected Areas within the catchment.

Groundwater is a source of drinking water as well as maintaining the flow in many rivers. In order to protect these sources (e.g. wells, boreholes and springs used for public drinking water supply) the Environment Agency has defined groundwater Source Protection Zones (SPZs) which are designed to protect individual groundwater sources from any activities that might cause pollution in the area. In this context they are used to inform pollution prevention measures in areas which are at a higher risk, and to monitor the activities of potential polluting activities nearby.

A large proportion of the Borough is covered by SPZs. The Environment Agency provides SPZ maps for the UK⁸⁹.

B.8.2.2 Water quantity

The Environment Agency has produced figures on water use per person across local authorities in Hertfordshire. In 2014/15 the household water use in Hertfordshire was approximately 148.28 l/h/d (litres per head per day or 'per capita consumption (PCC)'). For Dacorum, this was estimated to be 151.97 l/h/d which was one of the highest within the County compared to other districts.

The overall water consumption for Hertfordshire has remained fairly consistent over recent years (the revised estimate for 2012/13 was also 148 l/h/d). Water consumption rates in Hertfordshire have overall reduced from 163 l/h/p in 2009/10. This follows a similar trend to national water consumption which has fallen from 150 l/h/d in 1999 to 139 l/h/d in 2014/15.

The impact of these high water consumption levels is exacerbated by the fact that Dacorum is located in the driest region in the country. The East of England receives only two thirds of the average UK annual rainfall. Many of the region's surface and ground waters are under severe pressure with the Borough's rivers (particularly the Chess and Colne) frequently drying up in some parts. However, the Environment Agency has confirmed that Dacorum is not located within any defined Drinking Water Protection Areas⁹⁰.

Water resources are over abstracted in the region. Hertfordshire's natural water environment is constantly at risk from periods of drought and floods. Groundwater resources are now at or approaching full utilisation, and many rivers and streams including the Bulbourne, Gade and Ver suffer from low flows which detrimentally impacts upon water quality. Climate change could also contribute to a 5% loss of available water resource by 2035⁹¹.

⁸⁸ <https://www.catchmentbasedapproach.org/thames/thames-south-chilterns>

⁸⁹ <http://apps.environment-agency.gov.uk/wiyby/37833.aspx>

⁹⁰ Dacorum Borough Council (2016) Delivering Success: Authority Monitoring Report & Success on the Dacorum Development Programme 2014/15

<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/monitoring-reports-and-land-position-statements>

⁹¹ <http://www.hertslink.org/buildingfutures/content/migrated/obdocs/pdfs/waterjan11.pdf>

The Chilterns Chalk Streams are particularly susceptible to over abstraction. The Catchment Abstraction Management Strategy (CAMS) for the Colne catchment identified that the underlying chalk aquifer is assessed as being ‘over-abstracted’.

The Water Cycle Scoping Study (April 2010) indicates that in relation to a housing growth level of 9,000 homes (2010 – 2031), for potable water supply; waste water and sewerage network capacity; flood risk; and the water environment, the only major constraints are those related to the Maple Lodge waste water treatment works which serve Hemel Hempstead and Kings Langley. However for a higher growth scenario of 17,000 homes in the same period there would be wider issues including the supply of potable water.

B.8.2.3 Flood risk

The landscape of south-west Hertfordshire, including Dacorum Borough, is such that the level of flood risk is relatively low, in particular along the chalk tributaries such as the Gade and the Bulbourne where the catchment topography is such that river flooding will only affect a relatively narrow and well-defined corridor as opposed to an expansive floodplain. The main issues in Dacorum relate to the capacity of surface water and sewer drains, which can result in localised pluvial flooding following heavy rainfall.

The River Gade flows from north to south through Hemel Hempstead town centre, while Berkhamsted is situated along the River Bulbourne and the Grand Union Canal.

The Level 1 Strategic Flood Risk Assessment (SFRA) carried out for Dacorum Borough Council in 2018 identified that sections of the Grand Union Canal in Berkhamsted have potential to fail which would result in significant damage to property. Tring has four reservoirs nearby, though the chance of reservoir failure is very unlikely⁹².

The Level 2 SFRA concluded that the area situated between the Grand Union Canal and the River Bulbourne could be considered as a ‘danger for most’ area in the event of a breach of the Canal due to significant water depths (of up to 1 metre within 30 minutes). It also highlighted that raised road embankments and culverts designed for standard fluvial flooding which cross the Bulbourne could cause water to backup and result in significant flood depths in low lying areas behind them. Large areas adjacent to the River and the Canal could be at significant risk from flood depths, flood flows and debris⁹³.

B.8.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for considering flood risk, water quality and water resources, in particular through ‘Policy 31 Water management’ and ‘Policy CS32 Air, Soil and Water Quality’. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area, meaning that effects on water

⁹² Dacorum Borough Council 2018 SFRA Level 1 <https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/environment/strategic-flood-risk-assessment-2018.pdf> Accessed 28.10.20

⁹³ http://www.dacorum.gov.uk/docs/default-source/planning-development/sfra_level2_final_june2008.pdf?Status=Master&sfvrsn=0

would still be considered when planning new developments. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will have the opportunity to strengthen the policy framework in relation to flood risk, water quality and water resources through updated strategic and DM policies. The new Local Plan will be able to ensure that development, beyond that already identified in the Core Strategy and Site Allocations DPD, is located having taken into account the issues relating to flood risk, water quality and water resources. Without the new Local Plan any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, could occur in areas which might not result in the best outcomes in relation to these factors.

B.8.4 Issues and opportunities

- There are some issues with river water quality in Dacorum
- Over abstraction of water resources is an issue in the region. The Chilterns Chalk Streams are particularly susceptible to over abstraction.
- Some areas of Dacorum are at risk from flooding.
- There are issues relating to the future capacity of waste water treatment works serving the area.
- Considering overall siting of development schemes in order to minimise potential effects on water quality.
- Taking account of groundwater resources and sensitivities (e.g. source protection zones) when allocating sites for development
- Encouraging the use of Sustainable Drainage Systems in new developments.
- Ensuring that efficient use of water resources in development schemes, this includes the use of recycled water and incorporating rainwater re-use.
- Ensuring that new potentially polluting processes are located in areas where groundwater is not vulnerable.

B.8.5 Sustainability appraisal objectives and sub-objectives

To protect, maintain and enhance water resources (including water quality and quantity)

- To encourage higher water efficiency and conservation in new and existing developments; promoting local water recycling initiatives and rain water harvesting
- To ensure water consumption does not exceed levels which can be supported by natural processes and storage systems
- To improve ecological status and flow of rivers and encourage practices which reduce nitrate levels in groundwater

- To reduce the number and severity of pollution incidents and reduce the risks to groundwater resource from contamination
- To take account of the existing and future capacity of sewerage network

To reduce flood risk

- To avoid developments in areas which at risk from fluvial, sewer, groundwater flooding (for instance natural flood plains) or storm surges while taking into account the impacts of climate change
- To ensure that developments which are at risk from flooding, or are likely to be at risk in future due to climate change, are sufficiently adapted
- To take account of additional surface water generated by new development
- To promote properly maintained sustainable drainage systems (SUDs) to reduce flood risk and surface water run off

Social Factors

B.9 Population

B.9.1 Key policy context

The 'Population' topic in this SA/SEA primarily relates to demographics, about which there are very few specific plans, policies or strategies. However, many other types of plans and policies will have secondary impacts on the population, e.g. housing strategy policies on accommodation for the elderly. Therefore, when taking into account effects on the SA/SEA topic of 'population', cross reference should be made to issues covered within plans and policies relating to housing, education, social deprivation, crime (safety), recreation, leisure and sports.

Objectives relating specifically to demographics (not attempting to alter them, but rather to adapt to changes in future demographics), may be found in documents focusing on sustainable development. Examples can be seen in the EU Sustainable Development Strategy (updated in 2006), which includes an objective specifically on 'dealing with the economic and social implications of an ageing society' and the Europe 2020 Strategy which prioritises inclusive growth, 'fostering a high-employment economy delivering social and territorial cohesion'. The UK government has produced a set of sustainable development indicators to provide an overview of progress towards a sustainable economy, society and environment in the UK⁹⁴.

The NPPF emphasises the importance of responding and adapting to changes in population. In particular, the Framework highlights the social role that planning authorities have in supporting vibrant and healthy communities. One of the core planning principles is that the planning should *"take account of and support local strategies to improve health, social and cultural wellbeing for all sections of the community"*. This is crucial for maintaining a healthy population.

B.9.1.1 Relevant plans, policies and programmes

- EU Sustainable Development Strategy (updated 2006)
- Europe 2020 Strategy
- Dacorum Borough Council Adopted Core Strategy 2013
- Dacorum Infrastructure Delivery Plan 2017
- Dacorum Settlement Hierarchy Study (August 2017)

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<http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/sustainabledevelopmentindicators/2015-07-13>

B.9.2 The current situation

B.9.2.1 Population

The 2011 Census data establishes the population as 144,800, and at 2019 the population of Dacorum was expected to have reached 154,763 (ONS Mid-Year Estimates 2020). Between the Census in 2001 and 2011, there was an increase in population of 5%, and between the Census in 2011 and the 2015 mid-year estimate there was an increase of 6.9% (9,963 persons)⁹⁵.

In 2020 the Office for National Statistics (ONS) published the 2018 based sub-national population projections for England covering the 25 year period from 2018-2043. They project population at a UK level using recent trends in birth and death rates and migration. The projections do not take account of the future implications of local, regional or national policy. The UK population is projected to increase by 4.5% in the period 2018-2028. The ONS data is not available at a local authority level, but local data from Herts LIS suggests that the population in Dacorum during the period 2014-2039 is forecast to grow from 149,700 to 184,800⁹⁶.)⁹⁵.

The first release of 2011 Census data was published in July 2012 by the ONS. The data released related to population and household estimates at local authority level, rounded to the nearest 100. Dacorum's population rose by 7,000 between 2001 and 2011 to 144,800 (see Table B.9-1). The Borough has the highest population of any Hertfordshire district, but the percentage population increase over the ten years from 2001 to 2011 was lower than in all the other districts.

Table B.9-1: Resident population (rounded to nearest 100)⁹⁷

	Resident Population		Change 2001–2011	% Change 2001–2011
	2001	2011		
Dacorum	137,800	144,800	7,000	5.08%
Hertfordshire	1,034,000	1,116,000	82,000	7.93%

Information on age breakdown from the 2011 Census shows a decrease in the percentage of the population aged under 15 in Dacorum and an increase in those aged 65 and over (see **Table B.9-2**).

⁹⁵ Calculated from data in the ONS mid-year population estimates <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalescotlandandnorthernireland> Accessed 15/10/20

⁹⁶ Data to the nearest hundred. Sourced from Herts LIS website: <http://atlas.hertslis.org/profiles/profile?profileId=1036&geoTypeld=>

⁹⁷ Source: Census 2001 and 2011

Table B.9-2: Age breakdown in Dacorum⁹⁸

	2001	2011	% Change
% of population aged 0-14	19.7%	18.6%	-1.1%
% of population aged 15-64	65.2%	65.6%	+0.4%
% of population aged 65 and over	15.2%	15.8%	+0.6%
% of population aged 90 and over	0.6%	0.8%	+0.2%

B.9.2.2 *Deprivation*

Dacorum ranked 240th out of 317 local authority areas in England in the 2019 Index of Multiple Deprivation rankings (a rank of 1 being the most deprived). This compares to a ranking of 260/326 in 2015, 255/354 in 2010, 288/354 in 2007 and 306/354 in 2004. The neighbouring authorities in southwest Hertfordshire had the following ranks: Three Rivers 291/317 (300/326 in 2015), St Albans 306/317(319/326 in 2015) and Watford 195/317(194/326 in 2015).⁹⁹

Despite the relatively low levels of deprivation in the Borough as a whole, there are however small pockets of more deprived areas within Dacorum. The Index of Multiple Deprivation divides the Borough into 94 smaller areas called lower super output areas (LSOAs). Nine LSOAs in the Borough rank within the most deprived half of local areas nationally. The most deprived area in the Borough (Dacorum 008D) which is within Hemel Hempstead town, is within the 20% most deprived areas in England. Other areas which are all within the 30% most deprived local areas include Highfield, Grovehill, Woodhall Farm and Adeyfield East. Twenty-five out of the 94 LSOAs in the Borough are within the 10% least deprived in the country¹⁰⁰.

The Public Health England profile for Dacorum (2020) shows that 12.3% of children in the Borough are from low income families (compared with the England average of 17%)¹⁰¹.

B.9.3 *The likely situation without the plan*

The existing Core Strategy provides the strategic framework for the provision of homes, jobs, services and facilities to help meet the needs of the Borough’s existing and future population. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that development is planned to meet

⁹⁸ Source: Census 2011

⁹⁹ <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> Accessed 15/10/20

¹⁰⁰ <http://dclgapps.communities.gov.uk/imd/idmap.html>

¹⁰¹ Public Health England (2020) Dacorum District Health Profile 2019: <https://fingertips.phe.org.uk/profile/health-profiles/> Accessed 15/10/20

the updated needs of the area. Without the new Local Plan, any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, is likely to result in uncoordinated development that fails to meet all needs and does not link new development with appropriate new supporting infrastructure.

B.9.4 Issues and opportunities

- Despite the relatively low levels of deprivation in the Borough as a whole, there are however small pockets of more deprived areas within Dacorum
- Take account of an increasing population
- Take account of an ageing population
- Tackle issues of deprivation in certain areas of the Borough
- Ensure adequate housing, facilities and infrastructure whilst protecting and enhancing the local environment.
- Use planning obligations to help secure an appropriate range of facilities.

B.9.5 Sustainability appraisal objectives and sub-objectives

See other 'social' topics for SA Objectives that cover population.

B.10 Health and Wellbeing

B.10.1 Key policy context

The UK's Sustainable Development Strategy (2011) sets out five guiding principles of sustainable development, one of which is *"ensuring a strong, healthy and just society"*. The NPPF seeks to support this strategy and incorporates this into its own core planning principle, that planning should: *"take account of and support local strategies to improve health, social and cultural wellbeing for all"* and *"fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being"*.

In order to promote healthy communities, the NPPF states the importance of social interaction and inclusive communities which should be facilitated through the planning system. The planning process should involve all sections of the community and should facilitate neighbourhood plans. In relation to health, this will concern the delivery of social, recreational, sport and cultural facilities and services. The NPPF requires that planning policies and decisions take a positive approach to planning for use of shared space and community facilities and protect against the loss of such facilities.

The NPPF also highlights the importance of access to high quality open spaces and sport and recreation facilities to community health and wellbeing. The NPPF recommends having up to date needs assessments for open space, recreation and sport facilities to indicate demand and highlight opportunities for new provision. It also states that *"existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless..."* there is a surplus to requirements of such facilities (as indicated by a needs assessment; new development will replace existing facilities to an equal or greater standard; or the need for alternative sport or recreation provision is demonstrated to outweigh the loss of existing provision. In general, the NPPF encourages the replacement of sport and recreation facilities with newer or better equivalent facilities, rather than an absolute loss.

With respect to rights of way, the NPPF provides the following guidance: *"Planning policies should protect and enhance public rights of way and access including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails"*

In 2012, the Health and Social Care Act gave an increasing responsibility to local authorities in achieving health targets provided by the Government. Following the Act, local government now has responsibility for public health and improving the health of local communities. In Hertfordshire and the surrounding counties, there are a number of trusts who manage healthcare services within the area. Within southwest Hertfordshire, this is the West Hertfordshire Hospitals (WHH) NHS Trust who manage the Watford, Hemel Hempstead and St Albans Hospitals. The WHH NHS Trust has a strategy and annual plan outlining its plan for future services including those which affect Dacorum Borough.

The NPPF requires that *"planning policies and decisions should aim to achieve places which are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible*

pedestrian routes, and high quality public space, which encourage the active and continual use of public areas”

Objectives and aims relating more directly to crime and safety are included within the ‘towards 2021’ Dacorum Sustainable Community Strategy (2008).

B.10.1.1 Relevant plans, policies and programmes

- UK’s Sustainable Development Strategy (2011)
- 2012 Health and Social Care Act
- The NHS Long Term Plan 2019
- Hertfordshire County Council Health and Wellbeing Strategy 2016-2020
- Hertfordshire County Council Active Travel Strategy (2013)
- Hertfordshire County Council Road Safety Strategy (2011)
- Hertfordshire Physical Activity And Sport Framework (2015)
- Herts Valleys CCG Your Care, Your Future Vision
- Dacorum Borough Council Open Space Assessment Report (2019)
- Dacorum Borough Council Infrastructure Delivery Plan 2013
- West Hertfordshire Hospitals NHS Trust Five Year Plan 2014-2019
- West Hertfordshire Hospitals NHS Trust Annual Plan 2015-2016
- West Hertfordshire Hospitals NHS Trust Future of Hospital Services Strategic Outline Case July 2019
- Crime and Disorder Act 1998
- Dacorum Core Strategy 2006-2031
- Dacorum Infrastructure Delivery Plan 2017
- Dacorum Sustainable Community Strategy (2008)

B.10.2 The current situation

B.10.2.1 Life expectancy

Life expectancy in the Borough for both men and women is higher than the England average; however this varies for men and women and according to levels of deprivation. Within Dacorum, life expectancy is 7.2 years lower for men and 5.6 years lower for women in the most deprived areas of the Borough than in the least deprived areas¹⁰².

¹⁰² Public Health England (2015) Dacorum District Health Profile 2015:
<http://www.apho.org.uk/resource/item.aspx?RID=50473>

The life expectancy at birth for a resident in Dacorum between in 2016-18 was 81.4 years for men and 84.3 years for women¹⁰³. Between 2000-2002 and 2011-2013 life expectancy for men increased by 2.4 years¹⁰⁴.

The principal causes of death in Hertfordshire are: heart disease and stroke, dementia and Alzheimer's disease, cancers, and respiratory diseases. These conditions are also principal causes of disability and ill health in the County.

B.10.2.2 General health

The health of residents within Dacorum is generally better than the England average.

At the last Census (2011), 4.0% of residents in Dacorum reported their health as poor or very poor (compared to 3.9% in Hertfordshire and 5.5% in England), and 14.7% reported a long term illness or disability that impacts on their day to day activities (compared to 14.3% in Hertfordshire and 18% in England).

The 2020 Health Profile¹⁰⁵, shows that the percentage of adults smoking has fallen to 11.4% from 17.4% in 2014 (this is better than the England average of 13.9% in 2020). There has been a significant increase in the percentage of physically active adults within Dacorum from 58.1% in 2014 to 73.3% in 2020, (which is better than the England average of 67.2%¹⁰⁶). The 2020 Health Profile also reports that 58.8% of adults and 15.1% of year 6 children are classified as overweight or obese (slightly better than the England averages of 62.3% and 20.2%). Statutory homelessness in 2020 in Dacorum was better than the England average (at 0.2 per 1,000 households compared to 0.8 nationally).

Local health and wellbeing priorities within the Borough are increasing levels of physical activity in adults and subsequently reducing levels of obesity; and continuing to reduce the proportion of the population smoking.

B.10.2.3 Healthcare

In Hertfordshire, there are four major acute hospitals, the nearest one for Dacorum residents is the Watford General Hospital. These hospitals provide over 60% of acute care for Hertfordshire residents, with hospitals outside Hertfordshire also being accessible to residents. Close to 98% of Hertfordshire's population live within 30 minutes of an acute hospital (travelling by car). Hemel Hempstead Hospital has a 24 hour urgent care centre and a GP led health centre. In respect of acute care, much of the West Herts Hospital Trust (WHHT) estate is in poor condition and is in urgent need of investment¹⁰⁷.

¹⁰³ Public Health England (2020) Dacorum District Health Profile <https://fingertips.phe.org.uk/profile/health-profiles/> Accessed 15/10/20

¹⁰⁴ <http://atlas.hertsllis.org/IAS/profiles/profile?profileId=280&geoTypeld=15&geolds=26UC#iasProfileSection4>

¹⁰⁵ Public Health England (2020) Dacorum District Health Profile: <https://fingertips.phe.org.uk/profile/health-profiles/data> Accessed 15/10/20

¹⁰⁶ Public Health England (2020) Dacorum District Health Profile: <https://fingertips.phe.org.uk/profile/health-profiles/data> Accessed 15/10/20

¹⁰⁷ Dacorum Borough Council Draft Local Plan 2020

In Dacorum, the key aspect of health provision is local GP services as there are no strategic health facilities within the District. In 2020, there are 19 NHS GP practices in the Borough, however, many of the GP surgeries are recognised as operating at over capacity. Additional population growth from new housing¹⁰⁸ is likely to increase the pressure on local health infrastructure and require more health facilities to be provided.

B.10.2.4 Noise

Complaints about noise in Hertfordshire have decreased slightly between 2009/10 and 2013/14, with 5.7 complaints received per 1,000 population (in total, 6,513 complaints in 2013/14 compared to 6,678 complaints in 2009/10). Of the complaints received in 2013/14, 69% related to domestic noise; 14% to commercial noise; 7% to construction noise; 3% to both vehicle/machinery noise and industrial noise; and 2% were classed as miscellaneous noise complaints¹⁰⁹.

Hertfordshire is susceptible to noise from aircraft, due to its close proximity to the major airports of Stansted and Luton. In 2013, the total number of complaints received in Hertfordshire for Stansted was 176; this was 19.4% of the total number of complaints. In 2014, the figure increased to 244, (23.9% of the total number of complaints received). In 2013, the number of complaints for Luton was 707, 69% of the total.

In Dacorum Borough, noise complaints showed a general decline, from 757 complaints in 2010/11 to 458 in 2013/14. However, this was a slight increase from the previous year, when there were 406 noise complaints^{110 111}.

B.10.2.5 Recreation, sport and leisure space and facilities

The Borough contains a diverse range of leisure and sports facilities, including public and private outdoor sports facilities for children and adults as well as parks, allotments and gardens. Dacorum Sports Trust manages a number of sports services within the Borough, including sport centres at Hemel Hempstead, Berkhamsted, Kings Langley, Tring and Longdean as well as an athletics track and an extreme sports facility, both in Hemel Hempstead, and a golf complex in Bovingdon.

As well as having sport and leisure facilities in the main towns, the Borough's villages and a number of the hamlets have outdoor sport and recreation facilities such as football pitches, 64 children's play areas, and cricket pitches. Some also have bowling greens and tennis courts. However, there is considered to be a lack of public outdoor sport facilities available in a

¹⁰⁸ Based on an OAN of 756 per year from 2013 to 2036 as outlined in the South West Hertfordshire Strategic Housing Market Assessment (SHMA) 2016

¹⁰⁹ Hertfordshire Quality of Life Report (2014)

<http://atlas.hertslis.org/IAS/profiles/profile?profileId=920&geoTypeld=16&geolds=26>

¹¹⁰ Hertfordshire Quality of Life Report (2014)

<http://atlas.hertslis.org/IAS/profiles/profile?profileId=920&geoTypeld=16&geolds=26>

¹¹¹ NB: The Hertfordshire Quality of Life Report has not been produced post-2014.

number of areas including Aldbury, Flamstead and Flaunden, although this is alleviated by amenity greens and recreation grounds¹¹².

The Council and The Box Moor Trust provide just over 700 hectares of public open space across 491 sites. This includes a large amount of amenity green space and also parks and playing fields, providing structural green space. Despite this, in Hemel Hempstead there is a small deficiency in leisure space (6.02 ha).

Berkhamsted has relatively little public open space within the town, with most of that available being used for school playing fields, followed by private sports facilities. A large proportion of the large scale sites are located on the urban fringe. As a result the town is considered as being deficient of leisure space. Although there are 350 ha of semi natural green space within 2 km of the town's boundary.

In Tring, there is a lower area of open space per 1000 population than in Hemel Hempstead and Berkhamsted with limited opportunities for informal recreation, however there is a high proportion of outdoor sports facilities and clubs, although a large amount of this space consists of school grounds which are not easily accessible. Outside the boundaries of the town there are large areas of accessible green space in almost all directions¹¹³.

Kings Langley has a good provision of open space which includes allotments, the Common, outdoor sports facilities, the churchyard and cemetery, school playing fields and the canal corridor and lakes. Chipperfield has its substantially sized common. However, Bovingdon has a significant under provision of open space. It lacks allotments, green corridors, parks and gardens and space for children and young people although there are more playing fields than the other villages¹¹⁴.

In the area of Ashridge and Watling area, the commons adjacent to Little Gaddesden and Potten End meant there is plentiful accessible green space provision in these settlements. Provision in Markyate and Flamstead have much less provision, although there are playing fields and play areas accessible. Flamstead has a particular shortage of open space while Markyate is deficient of 2.5 ha of leisure space¹¹⁵.

Within the Borough, there are four Green Flag parks, recognised as some of the best green spaces in the country with excellent park management standards. These are:

- Bunkers Park, Hemel Hempstead
- Canal Fields, Berkhamsted

¹¹² Dacorum Open Space Study (2008)

<http://www.dacorum.gov.uk/docs/default-source/planning-development/final-version-of-open-space-studyv3.pdf>

¹¹³ Dacorum Green Space Strategy (2011) <http://www.dacorum.gov.uk/docs/default-source/regeneration/green-space-strategy-2011.pdf?Status=Master&sfvrsn=0>

¹¹⁴ Dacorum Green Space Strategy (2011) <http://www.dacorum.gov.uk/docs/default-source/regeneration/green-space-strategy-2011.pdf?Status=Master&sfvrsn=0>

¹¹⁵ Dacorum Green Space Strategy (2011) <http://www.dacorum.gov.uk/docs/default-source/regeneration/green-space-strategy-2011.pdf?Status=Master&sfvrsn=0>

- Chipperfield Common, Chipperfield
- Tring Memorial Garden, Tring

There are also two ‘Queen Elizabeth II Fields’ in Dacorum. The Queen Elizabeth II Fields Challenge is run by Fields in Trust, and was set up to celebrate Queen Elizabeth II's Diamond Jubilee in 2012. It aims to protect a diverse range of outdoor spaces across the UK to ensure they remain a permanent legacy guaranteed for future generations to enjoy. Bovingdon Green and Gadebridge Park are two of only 2,012 QEII Fields across the UK and are now be protected as green spaces forever¹¹⁶.

Other ‘destination’ park areas within the Borough include Ashridge Estate, Boxmoor (including Heath Park and Plough Gardens), Tring Park and Tring Reservoirs.

The Grand Union Canal, which flows through the Borough, provides for boaters and anglers, with walkers and cyclists having the opportunity to use the canal towpaths.

Within the Dacorum countryside, there is an extensive rights of way network equating to over 360 miles, with well-publicised paths and routes including the Chilterns Country Walks and the Markyate Heath Walks as well as routes along the Grand Union Canal. The long distance walking routes of the Chiltern Way and Hertfordshire Way also pass through the Borough. Hertfordshire County Council, through the Countryside Management Service, have developed a network of on and off road cycle paths through the County, producing around 25 guides for the different routes, a number of which are located within Dacorum including Hemel Hempstead, Tring, Berkhamsted and the Grand Union Canal. Dacorum also has nearly 800 hectares of Open Access Land, primarily made up of commons.

The Open Space Study¹¹⁷ carried out in 2019 identified that there were 38 allotments in the Borough, totalling an area of over 40 hectares. The allotments are generally rated as being high quality, well-kept, well-presented plots. Sites outside Hemel Hempstead are managed by local parishes, town councils or community organisations in the following areas¹¹⁸:

Albury (50 plots)	Flaunden	Nash Mills
Berkhamsted (375 plots)	Great Gaddesden	Nettleden with Potten End
Bovingdon	Kings Langley	Northchurch
Chipperfield	Little Gaddesden	Tring (93 plots)
Flamstead	Markyate	Wiggington (25 plots)

In 2020, there were over 600 applications on the waiting list for an allotment plot¹¹⁹

¹¹⁶ <http://www.dacorum.gov.uk/home/leisure-culture/parks-play-and-open-spaces/green-flag-award> Accessed 22/08/17

¹¹⁷ [Dacorum Borough Council Open Space Study Assessment Report July 2019](#)

¹¹⁸ Number of plots is provided where information is available

¹¹⁹ <https://www.dacorum.gov.uk/docs/default-source/council-democracy/spae-28-01-2014-allotment-report.pdf?sfvrsn=0>

B.10.2.6 Crime and Safety

In the year ending March 2020, the crime rate in Dacorum was slightly lower than average for the Hertfordshire police force area (recorded crime rate per 1,000 population/households for headline offences), as shown in **Figure B.10-1**.

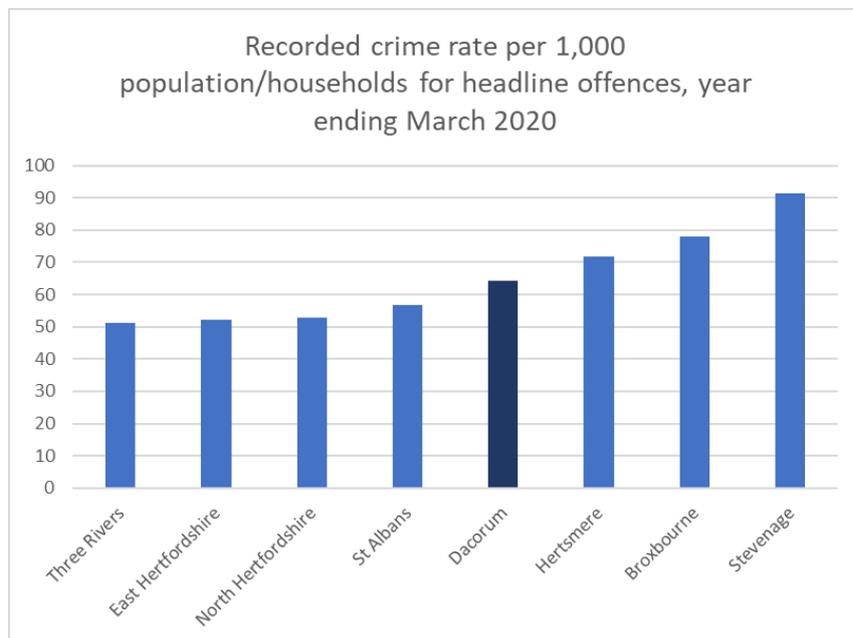


Figure B.10-1: Crime rate in Dacorum and other Hertfordshire local authority areas¹²⁰

B.10.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for the provision of services, facilities, Green Infrastructure and social infrastructure to help meet the needs of the Borough's existing and future population. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that development is planned to address any new issues in relation to health and wellbeing, recreation & leisure, and crime & safety that are identified during the preparation of the plan.

¹²⁰ Graph produced by author based on data at

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/recordedcrimedatabycommunitysafetypartnershiparea> Accessed 15/10/20

B.10.4 *Issues and opportunities*

- Need to address health inequalities.
- Demand for healthcare in the Borough is likely to increase as the population increasing, particularly the number of elderly residents.
- Priorities in Dacorum are to reduce levels of obesity and increase levels of physical activity in adults, and to reduce the prevalence of smoking.
- Much of the West Herts Hospital Trust (WHHT) estate is in poor condition and is in urgent need of investment.
- Dacorum's increasing population will lead to additional pressure on secondary healthcare services in the Borough and also the County as a whole. The increasing proportion of older people in the Borough's population is also likely to put pressure on secondary healthcare needs, as they are likely to utilise healthcare services more than others.
- Encourage healthy forms of travel and exercise, e.g. walking/cycling and access to leisure and recreational facilities.
- Certain areas within the Borough, in particular Berkhamsted, Markyate and to a lesser extent Hemel Hempstead, are deficient of leisure space and this should be addressed in order to encourage a healthier lifestyle amongst residents.
- Encourage the provision of convenience stores that provide fresh produce in accessible locations.
- Designing out crime by improving the urban environment. This may be through redevelopment or adding additional security features such as CCTV and improved lighting.
- Developing community activities and facilities that can divert people away from crime, improve tolerance and prevent anti-social behaviour.

B.10.5 Sustainability appraisal objectives and sub-objectives

To improve the health and wellbeing of the local population

- To include measures which will improve everyone's access to high quality health care facilities
- To promote and enable the health advantages of walking and cycling and community based activities
- To identify, protect and enhance open spaces, such as rivers and canals, parks and gardens, allotments and playing fields, and the links between them, for the benefit of people and wildlife
- To minimise noise and odour pollution, particularly in residential areas
- To narrow the income gap between the poorest and wealthiest parts of the area and to reduce health differential
- To take health and access issues into account in new developments
- To improve community cohesion through reducing inequalities, promoting social inclusion and reducing crime and the fear of crime
- To include measures which will improve everyone's access to high quality education, community facilities and public transport
- To recognise the value of the multi-cultural/faith diversity of the peoples in the Borough
- To improve the quality of life in urban areas by making them more attractive places in which to live and work, and to visit
- To encourage community cohesion
- To encourage high quality design in new developments, including mixed uses, to create local identity and encourage a sense of community pride
- To ensure facilities and services are accessible by people with disabilities and minority groups
- To encourage people to access the learning and skills they need for high quality of life
- To ensure that the Plan does not discriminate on the basis of disability, ethnic minority, or gender
- To tackle deprivation in the Borough's most deprived areas
- To plan new developments to help reduce crime and fear of crime through thoughtful design of the physical environment, and by promoting well-used streets and public spaces
- To support crime/safety initiatives to tackle anti-social behaviour

B.11 Housing

B.11.1 Key policy context

The NPPF highlights the need to deliver a wide choice of high quality homes and sets out how local authorities should plan for a mix of housing. It lists a number of actions that local authorities should take in order to “*boost significantly the supply of housing*”:

- *use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period;*
- *identify and update annually a supply of specific deliverable sites sufficient to provide five years’ worth of housing against their housing requirements with an additional buffer of 5% (moved forward from later in the plan period) to ensure choice and competition in the market for land. Where there has been a record of persistent under delivery of housing, local planning authorities should increase the buffer to 20% (moved forward from later in the plan period) to provide a realistic prospect of achieving the planned supply and to ensure choice and competition in the market for land;*
- *identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15;*
- *for market and affordable housing, illustrate the expected rate of housing delivery through a housing trajectory for the plan period and set out a housing implementation strategy for the full range of housing describing how they will maintain delivery of a five-year supply of housing land to meet their housing target; and*
- *set out their own approach to housing density to reflect local circumstances.”*

The New Local Housing Needs Assessment as well as the standard methodology for calculating housing need addresses the requirements of the NPPF and considers the housing need in the South West Hertfordshire Housing Market Area including Dacorum Borough. The SHMA looks at the overall housing need, the need for different sizes of homes and the needs of different groups within the community. The Council use this as part of the process of determining housing requirements within the Borough.

National policy for Gypsies and Travellers is set out in the Planning Policy for Traveller Sites (August 2015), which accompanies the NPPF. This guidance encourages fair and equal treatment for travellers, and urges local planning authorities to identify need and plan for future provision in appropriate locations. It recognises the sensitivity of new sites in rural areas, particularly the Green Belt, and seeks to limit the number and scale of new traveller site development in open countryside.

In practice the document states that (Planning for Traveller Sites Page 3):

“Local planning authorities should set pitch targets for Gypsies and Travellers and plot targets for travelling Showmen which address the likely permanent and transit site accommodation

needs of Travellers in their area, working collaboratively with neighbouring local planning authorities”.

“Criteria should be set to guide land supply allocations where there is identified need”.

The Housing White Paper (2017) sets out measures for boosting housing supply, through: ‘Planning the right homes in the right places’; ‘Building homes faster’; ‘Diversifying the market’; and ‘Helping people now’.

B.11.1.1 Relevant plans, policies and programmes

- Housing Act 2004
- Traveller Accommodation Needs Assessment Update 2013
- Planning for Traveller Sites 2015
- Gypsy and Traveller Accommodation Assessment 2019
- South West Hertfordshire Strategic Housing Market Assessment (SHMA) 2016
- South West Hertfordshire Local Housing Needs Assessment 2020
- Strategic Housing Land Availability Assessment (SHLAA) 2015
- ‘Fixing our Broken Housing Market’, Housing White Paper 2017
- Changes to the current planning system, out for consultation in August 2020
- Dacorum Infrastructure Delivery Plan 2017
- Custom and Self Build demand assessment framework 2018

B.11.2 The current situation

B.11.2.1 Households

The Census shows that the number of households in Dacorum increased by just over 4,000 between 2001 and 2011 (see Table B.11-1). Of these, 17.4% were local authority homes.

Table B.11-1: Households with at least 1 usual resident (rounded to nearest 100)

	Households 2001	Households 2011	Change 2001-2011	% Change 2001-2011
Dacorum	55,900	59,900	4,000	7.15%
Hertfordshire	420,650	453,800	33,150	7.88%

Household projections from the Communities and Local Government¹²¹ show that in Dacorum there will be an increase in households from 63,920 to 67,714 (+5.9%) in the period 2018 to 2028. . Of the other local authority areas in Hertfordshire; East Hertfordshire and Welwyn

¹²¹

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/householdprojectionsforengland/2018based#change-by-region-and-local-authority> Accessed 28/10/20

Hatfield are projected to experience higher proportionate levels of growth than Dacorum. Watford, Hertsmere and Three Rivers are projected to experience lower growth rates.

Although Dacorum will have a lower percentage of growth compared with most other Hertfordshire Districts, the absolute number of households remains significantly higher than the other Hertfordshire districts.

The average household size between 2012 and 2037 is anticipated to fall for England, the East of England region and Hertfordshire (and its local authorities). This is related to the number of one person households increasing, thus leading to a reduction in the average household size. In Dacorum, the average household size is projected to fall from 2.38 people to 2.27 over the 25 year period from 2012 to 2037.

In 2011, 77% of household spaces in Dacorum were houses or bungalows and 22% of household spaces were flats, maisonettes or apartments.

In 2011, 65% of households in Dacorum lived in owner occupied accommodation, 34% of households lived in rented accommodation and 0.62% of households lived in Shared ownership accommodation. In Hertfordshire the split was 67% owner occupied, 31% rented and 0.87% shared.

In 2011, 6.26% of households had one or more rooms less than they would be expected to require (based on the household composition and relationships between household members). According to the 2011 Census, 1.15% of households in Dacorum had over 1.0 person per room.

B.11.2.2 House prices

The average 4th quarter 2016 house prices for Dacorum, the main towns, and Hertfordshire are shown in **Table B.11-2**.

In general house prices in Dacorum rose from the average 2nd quarter 2015 prices. This continuing property price growth is reflected across each of Dacorum's towns. Almost all forms of house types experienced value increases over this period, although there was a reduction in the price of detached and semi-detached houses in Tring. However, it should be noted that the data is sensitive to the volume of sales and type of properties sold in any given quarter, with prices in the 3rd quarter 2016 having been higher than 2nd quarter 2015. In general prices in Berkhamsted and Tring have significantly exceeded the county average house price, whilst prices in Hemel Hempstead have been lower.

Table B.11-2: Average House Prices in Dacorum, main towns and Hertfordshire - 4th quarter 2016 to the nearest 100 (2nd Q 2015 in brackets)¹²²

	Detached	Semi-detached	Terraced	Flats / Maisonettes	Average
Berkhamsted	£1,011,000 (£986,500)	£609,700 (£498,300)	£519,000 (£441,400)	£334,200 (£319,400)	£617,300 (£562,200)
Hemel Hempstead	£709,100 (£599,900)	£423,900 (£356,100)	£341,800 (£288,600)	£230,400 (£188,100)	£369,400 (£328,500)
Tring	£679,200 (£850,100)	£437,299 (£483,000)	£386,000 (£350,200)	£273,100 (£214,600)	£448,700 (£503,300)
Dacorum	£815,800 (£767,700)	£455,000 (£410,400)	£368,800 (£327,200)	£251,100 (£232,000)	£428,700 (£408,600)
Hertfordshire	£805,700 (£719,300)	£481,100 (£414,300)	£366,300 (£317,200)	£255,100 (£224,400)	£442,900 (£387,400)

B.11.2.3 Housing needs

The Dacorum Borough Council Core Strategy projects the following housing trajectory from 2006-2031 (see Figure B.11-1).

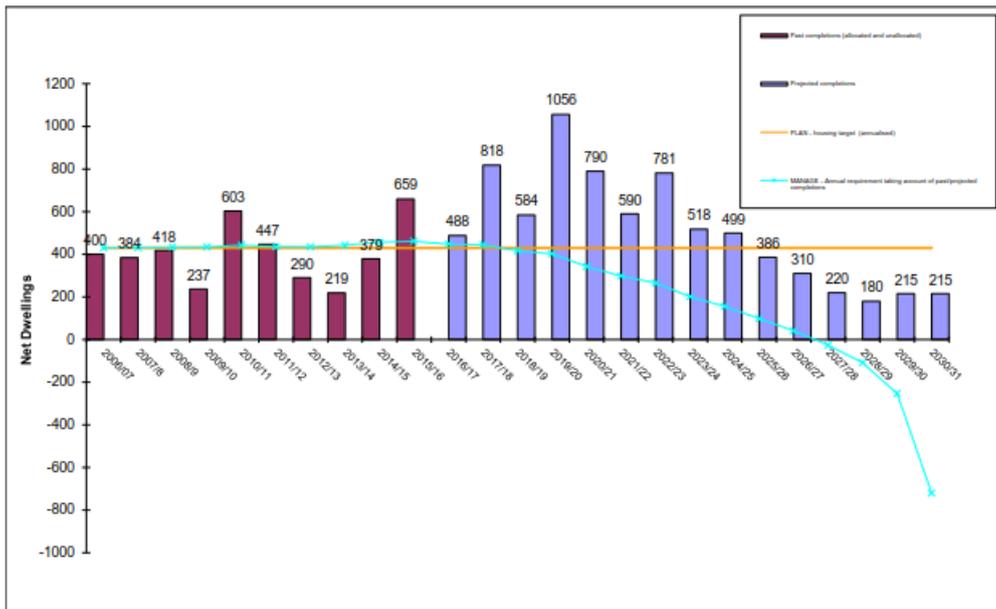


Figure B.11-1: Core Strategy Housing Trajectory 2006-2031

In 2016 there were 5,500 people on the Council’s waiting list, with 6.3% of households considered to be overcrowded.

¹²² Source: Data produced by Herts LIS

<http://atlas.hertslis.org/profiles/profile?profileId=994&geoTypeId=16&geoids=E10000015#isProfileSection4>

The revised method for calculating housing need identifies an annual housing requirement of 16,596 homes for the Borough over the Local Plan period 2020–2038, which equates to 922 dwellings per annum (dpa). The method for calculating housing need takes account of both the growth of the existing population and an adjustment to take account of affordability. This is the second-highest in the south-west Hertfordshire region after St. Albans (997 dpa), reflecting the size of the Borough. The South West Hertfordshire Local Housing Needs Assessment identifies that the annual housing need across Hertfordshire is 3,188 per annum, with 668 OAN for Hertsmere, 588 for Three Rivers and 533 for Watford.¹²³

The South West Hertfordshire Local Housing Needs Assessment 2020 (LHNA) recommends the following housing mix for the South West Hertfordshire Market Area (see Table B.11-3). This mix takes account of changes in the population structure, including how the age of a household influences the typical sizes of homes they occupy.

Table B.11-3: Recommended Housing Mix for south-west Hertfordshire

	1-bed	2-bed	3-bed	4+ bed
Market	5%	20%	45%	30%
Affordable	25%	40%	25%	10%
Affordable Homes to Rent	30%	35%	25%	10%

Evidence from the LHNA suggests that 52.6% of households are unable to afford market housing without subsidy. This is the third highest level of the six local authorities.

The need for specialist housing for older people is expected to increase along with an ageing population. At the time of the 2011 census 16.6% of the Borough’s population was aged 65 and over. In Dacorum, the need for rented housing with support is predicted to reach a shortfall of -149 dwellings by 2036 and the need for rented housing with care is expected to reach a surplus of 366 in that period. The need for leasehold housing with support and leasehold housing with care is predicted to reach a surplus of 726 and 248 dwellings respectively.

For people requiring registered care, the LHNA provides an indicative assessment of need for 1,940 care beds required in Dacorum for older persons over the 2020-36 period, for which there is a predicted surplus of 1,019 beds.

The LHNA considers the needs of a number of other vulnerable groups in south-west Hertfordshire. Across the region, 27.1% of households contain someone with some form of disability. It is estimated that the number of people with a disability will increase by 5,504 – an increase of 32.9% – between 2020 and 2036. The evidence from the LHNA indicates a need to provide additional homes which are wheelchair-accessible and homes which can be adapted to meet households changing needs.

¹²³ South West Hertfordshire Strategic Housing Market Assessment’ (2016)
<http://www.dacorum.gov.uk/docs/default-source/strategic-planning/shma-jan-2016-exec-summary.pdf?sfvrsn=4>

B.11.2.4 *Gypsy and travelling communities*

There are currently three travelling communities that are resident in Dacorum or visit the Borough: gypsies and travellers, travelling show people (both of whom live in caravans) and those who live in boats on the Grand Union Canal. However, there are also a number of the travelling community who live in 'bricks and mortar' accommodation.

At present there are two gypsy and travellers sites in Dacorum, both publicly owned and managed by Hertfordshire County Council. The site at Three Cherry Trees Lane in Hemel Hempstead has 30 permanent pitches with a capacity for up to 60 caravans. The site at Long Marston is smaller with 6 pitches and a capacity for 12 caravans. In 2013, there were 11 plots for travelling show people on one privately owned site¹²⁴. Whilst there are often short term vacancies at the Three Cherry Trees site, these are quickly filled from the waiting list¹²⁵. These sites accommodate travellers from the Irish Travellers and Romany Gypsy communities. These are separate ethnic groups and although they often live on the same sites, in most cases they prefer to live separately from one another.

During a caravan count in January 2012 there were 54 caravans in Dacorum, all of which were on the two public sites¹²⁶.

In addition to these existing sites, gypsy and traveller site provision are also planned for Local Plan 'Growth Area HH21 – West of Hemel Hempstead' and 'Growth Area HH22 – Marchmont Farm'.

A Traveller Needs Assessment (TNA) carried out in 2019¹²⁷ identified estimated an annual net growth rate of 1.5% of the Gypsy and Traveller population. The study identified the current and future need for 7 additional pitches for Gypsy and Traveller households that met the planning definition; 4 additional pitches for unknown households that may meet the planning definition; and 69 additional pitches for households who do not meet the planning definition. This totals 80 new pitches over the GTAA period (2017-36). At the time of the study, the Cherry Tree Lane site in Dacorum was already of a significant size and experiencing overcrowding.

In 2019 there were 3 sites in Dacorum identified as Travelling Showpeople yards and they are currently all occupied by non-Travellers. There is no current or future needs for additional plots for Travelling Showpeople in the Borough.

There is no need for new permanent residential moorings for canal boats.

Providing a more settled base for Gypsies and Travellers, enables these communities to have better access to key services (health, education and employment).

¹²⁴ Dacorum Borough Council and Three Rivers District Council (2013) Traveller Needs Assessment <http://www.dacorum.gov.uk/docs/default-source/planning-development/trdc-and-dacorum-travellers-needs-assessment-website.pdf?Status=Master&sfvrsn=0>

¹²⁵ Dacorum Borough Council (2015) Providing Homes and Community Services Site Allocations Background Paper

¹²⁶ This is a count of caravans not households. It refers to a count carried out on a specific day and therefore unauthorised encampments occurring at other times of the year are not taken into account.

¹²⁷ Dacorum Borough Council Gypsy and Traveller Accommodation Assessment, March 2019

B.11.3 *The likely situation without the plan*

The existing Core Strategy provides the strategic framework for the provision of homes to help meet the needs of the Borough's existing and future population, in particular through Policies CS17-CS21 that deal with housing numbers, housing mix, affordable housing, and Gypsy and Traveller accommodation. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that amount and type of housing development and accommodation is planned to meet the updated needs of the area. Without the new Local Plan these needs may not be met, and any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan, is likely to result in uncoordinated development that fails to link new housing development with appropriate new supporting infrastructure.

B.11.4 *Issues and opportunities*

- The Borough's population is changing with growing numbers of elderly residents forecast as a result of increased life expectancy. While this will add to the number of one person households and the population in communal homes, there is also evidence of an increase in the number of young children and more sharing. The past long term trend of declining household size has slowed significantly.
- The price of housing compared to earnings is an issue.
- The need for new pitches for Gypsies and Travellers is difficult to estimate accurately, principally because of the nomadic lifestyle of the communities themselves: it is difficult to identify all sources of need and there is a danger of double-counting individual requirements across different local authority areas.
- Meeting needs of Gypsy and Traveller communities even when they no longer choose to travel
- Ensuring the provision of a range of housing types to satisfy demand including affordable housing and mixed use developments and a range of housing types of varying sizes.
- Affordable housing provision is a challenge that needs to be addressed to ensure the future prosperity of the area.
- Provision of affordable housing in accessible locations.
- Ensuring appropriate housing provision for the elderly and disabled population, e.g. through independent living housing, Life-long homes and appropriate forms of affordable housing.

- Ensuring that such housing is located near to the necessary services and facilities and public transport.

B.11.5 Sustainability appraisal objectives and sub-objectives

Ensure that everyone has access to good quality housing that meets their needs

- To contribute towards meeting the Borough's housing needs
- To provide a range of housing types, size and tenure, including high quality affordable and key worker housing that meet the needs of all communities within the Borough
- To reduce the percentage of unfit/non-decent homes
- To help reduce homelessness
- Meet the needs of the gypsy and traveller communities

B.12 Transport and Accessibility

B.12.1 Key policy context

Basic services and facilities are an important part of our communities. They provide essential services such as food and medical provisions. They also contribute to the sense of place in communities and provide a focal point for community interactions. They also provide employment, often for locally based people. Limiting access and availability to these services can make people feel socially excluded and reduce interactions in the community.

Transport planning falls into one of the core principles within the NPPF: actively managing growth patterns by focusing it in sustainable locations and maximising the use of public transport, cycling and walking modes. The NPPF highlights the importance of sustainable transport policies in *'help[ing] to reduce congestion and emissions, and improv[ing] air quality and public health'*¹²⁸. Effective transport planning can help reduce greenhouse gas emissions and air quality, lower levels of congestion, reduce the need for major transport infrastructure, promote more sustainable forms of transport and overall a healthier lifestyle amongst the population. Smarter use of technologies can also reduce the need to travel.

There are a number of local level plans and strategies for the transport network, identifying schemes required to improve the transport network so that it can meet the demand of a growing population. The Hertfordshire Local Transport Plan 2018-2031 (LTP4) sets out the County vision and strategy for transport. The aim of the strategy is to address existing transport issues and make better use of the existing road network as demand increases. It also aims to improve accessibility, particularly for non-car users and the disadvantaged. Two key aspects of the plan are increasing the use of intelligent transport systems, relating to traffic signals and real time information; and encouraging the use of sustainable transport and travel modes to curb the increase in car traffic. Alongside the LTP4 are a number of daughter documents. These strategies and plans each contain measures which support the LTP4 aims, particularly with respect to reducing car use.

B.12.1.1 Relevant plans, policies and programmes

- Hertfordshire's Local Transport Plan 2018-2031
- Herts Transport Vision 2050
- Hertfordshire County Council Active Travel Strategy (2013) (update expected 2020)
- Hertfordshire County Council Rail Strategy (2016) (update expected 2020)
- Hertfordshire County Council Rights of Way Improvement Plan 2017/18–2027/28 (2017)
- Hertfordshire County Council Road Safety Strategy (2011) (update expected 2020)
- Hertfordshire County Council Intalink Bus Strategy (2019)
- Hertfordshire County Council Intelligent Transport Systems Strategy (2011)

¹²⁸ National Planning Policy Framework 2019 Paragraph 103

- Hertfordshire County Council Growth and Transport Plan – South West Hertfordshire (Draft) (2017) (update expected 2020)
- South West Herts Cycling Strategy (2013)
- COMET 2020 Model Run 5 (results expected later in 2021)
- Dacorum Infrastructure Delivery Plan (2017)
- Dacorum Borough Council Cycling Strategy (2009)
- Dacorum Parking Standards Review (Draft) (2017) (expected to be adopted in November 2020)
- Hemel Hempstead Town Centre Masterplan 2011-2021 (2013)
- Hemel Hempstead Sustainable Transport Strategy (2020)
- Berkhamsted and Tring Sustainable Transport Strategy (2020)
- Maylands Area Travel Plan 2011 – 2016 (2011)
- Maylands Growth Corridor and M1 junction 8 improvements (2017)

B.12.2 The current situation

B.12.2.1 Access to key services

It is important for accessibility to be considered during spatial planning to ensure that people can get access to key services such as jobs, education, health and leisure facilities.

Table B.12-1 shows the proportion of new residential development completed between 2009/10 and 2014/15, that are within 30 minutes public transport time of a GP, hospital, primary and secondary school, employment and convenience retail¹²⁹.

Table B.12-1: Percentage of new residential development within 30 minutes public transport time of services/key activities¹³⁰

Service/key activity	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15
GPs	99%	100%	99%	99%	97%	94%
Hospitals	74%	74%	89%	95%	84%	79%
Primary schools	100%	100%	98%	100%	98%	99%
Secondary schools	98%	99%	98%	99%	76%	96%
Employment	100%	100%	99%	100%	95%	83%
Retail centre	97%	97%	98%	96%	90%	77%

Generally Dacorum is an accessible location for residents to access key services; particularly in terms of schools and GPs. However, hospitals, retail centres and employment are not so accessible, particularly in more rural areas within the Borough. Since 2009/10, the percentage

¹²⁹ This was the local plan policy in existence prior to the Adopted Core Strategy 2013

¹³⁰ Figures taken from Dacorum Borough Council Annual Monitoring Reports 2010-2016 available from: <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning#anchor>

of new residential developments that have been located within 30 minutes of key services has remained high, although as more development takes place it is becoming more challenging to find central locations that are close to retail centres and hospitals. In 2014/15, the percentage of new dwellings located close to hospitals, retail centres and employment was lower than the previous year. For employment this was the first time in six years that the proportion of new dwellings located within an accessible distance was below 95%.

B.12.2.2 Roads

The road network within the Borough is currently under stress at key locations. Traffic modelling undertaken to date has identified the following key findings as a result of Local Plan Growth (based on higher housing requirement of 1,023 dpa): Increased delays at M25 Junction 20 in all time periods; Greater delays in the PM Peak in Hemel Hempstead in the Maylands area including the Green Lane/M1 J8 roundabout caused by re-routeing to access the north link road; Greater levels of PM peak congestion in the north of Hemel Hempstead along Redbourn Road as traffic re-routes to use the north Hemel link road; Congestion on A4147 towards Hemel Hempstead and the A414/Green Lane junction in PM peak; and Greater levels of congestion towards Chesham in PM peak, caused by changes to routeing in the buffer network.

Table B.12-2 shows the traffic flows in the Borough. There was little change between 2013 and 2014, however a notable change of 3.1% between 2014 and 2015. This was a common trend across the Hertfordshire local authority areas. Of the 4.01 million VKm/Day in 2015, 1.73 million were on Principal A roads, 1.33 million on motorways and trunk roads, 0.21 million on B roads and 0.74 million on C roads. The increase in traffic was mostly seen on Principal A roads (up from 1.69 VKm/Day in 2014) and C roads (up from 0.69 VKm/Day in 2014). Compared to the previous year traffic reduced in five districts, remained similar in three districts and increased in two districts. Dacorum saw the largest change in this year with a 5.1% increase in traffic. This is likely to be due to the re-trunking of the A5 to the A5183 and the reclassification of the A4147 to the B440.

Table B.12-2: Vehicle Kilometres in Dacorum (based on 2016 and 2017 data)¹³¹

Dacorum	VKm/Day HCC Roads ¹³² (millions)	% Change HCC Roads (from previous year)	Highest Recorded Flow (AAWD)	Road
2017	2.89	5.1%	162,756	M1

¹³¹ Hertfordshire's Traffic and Transport Data Report 2018 <https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/ttdr/hertfordshire-traffic-and-transport-data-report-2018.pdf>

¹³² HCC roads = Hertfordshire County Council controlled roads, which excludes motorway and trunk roads

Traffic within the Borough is forecast to increase by 6% by 2021 from 2017 levels (and by 6.3% in Hertfordshire and 6.5% in the Eastern region) and by 17.4% by 2031 (18% in Hertfordshire and 19.9% in the Eastern region)¹³³. Currently, car ownership is at 83% in the Borough.

B.12.2.3 Public transport

Mainline rail is a good travel option for Dacorum, with access to stations in Apsley, Berkhamsted, Hemel Hempstead, Kings Langley (in Three Rivers District) and Tring. Apsley Station is a relatively short distance south of the Hemel Hempstead Station alongside the A4251, which effectively gives the town access to two stations¹³⁴. There are approximately five regional peak hour trains between London and Milton Keynes in each direction at these stations. London and Milton Keynes provide opportunities for onward travel to a variety of locations across the country including places such as London and Birmingham. It is worth noting that whilst rail links are good in a north-south direction they are much less so in a west-east direction.

A growth in passenger numbers means that the rail network is running at capacity and no major improvements are planned in the foreseeable future. It is unlikely that the new High Speed 2 rail system will address this as it will not reduce the number of passengers on regional trains passing through stations in Dacorum.

A high frequency bus service (No.500) links the settlements of Tring, Berkhamsted, Hemel Hempstead and Kings Langley with other major settlements, including Watford and Aylesbury. There is a good level of bus services in Hemel Hempstead where the network is generally well developed and an adequate level of service in other locations. Markyate is one specific area where bus transport is considered less reliable and not as well integrated with other larger local towns in the Borough¹³⁵. A key issue that has been identified is that bus services are not adequately linked between Hemel Hempstead rail station, Maylands and Hemel Hempstead town centre¹³⁶.

There are 21 miles of cycle path in the district. The walking and cycling network generally meets current demand however there are localised issues, such as congestion on some routes putting people off using those routes. Routes to stations in particular are considered to be inadequate¹³⁷.

¹³³ Hertfordshire's Traffic and Transport Data Report 2018 2018 <https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/ttdr/hertfordshire-traffic-and-transport-data-report-2018.pdf>

¹³⁴ Dacorum Infrastructure Study Transport Infrastructure Assessment 2011 [https://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-1a-dacorum-strategic-infrastructure-study---transport-\(2011\).pdf?sfvrsn=0](https://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-1a-dacorum-strategic-infrastructure-study---transport-(2011).pdf?sfvrsn=0)

¹³⁵ Dacorum Infrastructure Study Transport Infrastructure Assessment 2011 [https://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-1a-dacorum-strategic-infrastructure-study---transport-\(2011\).pdf?sfvrsn=0](https://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-1a-dacorum-strategic-infrastructure-study---transport-(2011).pdf?sfvrsn=0)

¹³⁶ Dacorum Infrastructure Delivery Plan Update 2014 [http://www.dacorum.gov.uk/docs/default-source/strategic-planning/cd-2-dacorum-infrastructure-delivery-plan-update-\(january-2014\).pdf](http://www.dacorum.gov.uk/docs/default-source/strategic-planning/cd-2-dacorum-infrastructure-delivery-plan-update-(january-2014).pdf)

¹³⁷ Dacorum Infrastructure Delivery Plan Update 2014 [http://www.dacorum.gov.uk/docs/default-source/strategic-planning/cd-2-dacorum-infrastructure-delivery-plan-update-\(january-2014\).pdf](http://www.dacorum.gov.uk/docs/default-source/strategic-planning/cd-2-dacorum-infrastructure-delivery-plan-update-(january-2014).pdf)

B.12.2.4 Air transport

Dacorum lies close to (a 20 minute drive), and is affected to the north east by the flight path of, London Luton Airport, the UK's 5th largest airport. The airport carried 10.5 million passengers in 2014. The Airport directly and indirectly employs over 600 and 8,000 staff respectively and is a key economic driver locally and for the eastern region, including Dacorum. In June 2014, Luton Borough Council granted planning permission for a £100m development of London Luton Airport by the airport operator. The work will increase annual passenger capacity from 12 million to 18 million by 2031. Work began in early 2015 and is scheduled to be completed by 2026. This expansion could have impacts on Dacorum, relating to increased noise from a higher number of aircraft movements; increased traffic in the Borough and the secondary effects of this (such as pollution and congestion). There may however be some benefits to the local economy.

The airport of Stansted (a 45 minute drive from Dacorum) is located to the east of Hertfordshire and although the majority of the impacts from this are felt to the east of the county, residents in Dacorum may also experience impacts associated with flight paths.

Flights out from Heathrow Airport (a 30 minute drive from Dacorum) fly over the Borough and there is a holding 'stack' over the Bovingdon area serving Heathrow, where flights coming into land have to wait before they arrive at the airport. This has been the case since 1960. With the proposed expansion of Heathrow there may be increased air movements and additional noise pollution over the area affecting residents in the future.

B.12.2.5 Community transport

Within Hertfordshire there is a Dial a Ride scheme which offers door to door transport for the elderly and people of all ages who have difficulty travelling due to permanent disability or illness. In Dacorum, a local charity 'Community Action Dacorum' has a fleet of minibuses available to hire for community groups and organisations in Dacorum for whom other forms of transport would not be feasible. There is also 'Community Cars' which provides transport services to residents of the Borough who have difficulties using public transport or private cars, for example due to disability or infirmity¹³⁸.

B.12.2.6 Travel behaviour

According to the 2011 Census, Dacorum has an average of 1.40 cars per household. Within the Borough, 16% of households reported having no car, 41% had one car, 32% had two cars and 10% had three or more cars. This is similar to the Hertfordshire figures but indicate higher car ownership compared with the East of England and England as a whole¹³⁹. The Hertfordshire County Travel Survey reports that in 2015, 9% of households had no car, 37%

¹³⁸ <https://www.dacorum.gov.uk/home%5Ccommunity-living/voluntary-organisations-social-enterprises/community-advice-and-support-groups>

¹³⁹ Census 2011 Table - KS404EW

had one car and 54% had two cars or more¹⁴⁰. This indicates an increase in cars per household since the 2011 Census.

Census data indicates that in Dacorum, the average distance commuted to work increased between 2001 and 2011 from 8.9 miles to 10 miles. This was also the average for Hertfordshire in 2011. The predominant mode used to travel to work was by car (by about 60%) (see **Table B.12-3**).

According to the 2015 Hertfordshire County Travel Survey, 29% of work trips in Dacorum are less than 5 miles (which is lower than the Hertfordshire average of 31%).¹⁴¹

Table B.12-3: Travel to work mode share for Dacorum and Hertfordshire¹⁴²

	Car Driver	Car passenger	Rail/ underground	Bus, Minibus, Coach	Taxi	Motorcycle	Walk	Bicycle	Other	Work at home
Dacorum	59.9%	4.4%	9.1%	3.0%	0.4%	0.7%	9.0%	1.1%	0.4	12.0%
Hertfordshire	56.7%	4.0%	13.4%	3.1%	0.4%	0.7%	8.5%	1.6%	0.4	11.1%

The Census also shows that the proportion of all ‘journey to work trips’ being made by cycling remained relatively unchanged between 2001 and 2011 at 1.2 (compared to 1.1% in 2001). This was lower than both the county and national figures. In England, cycling to work trips increased slightly over the same period from 2.8% to 2.9%¹⁴³.

The 2015 County Travel Survey reports that cycling makes up only 1% of modal share in Dacorum (when considering total distance travelled where cycling was the main mode), which is one of the lowest in Hertfordshire, alongside Broxbourne at 1.1%. In Hertfordshire as a whole, the proportion is 3%.

In terms of walking to work, in Dacorum this decreased from 9.6% in 2001 to 8.9% in 2011. This decline is in line with the county and national trends¹⁴⁴. The mean distance walked in Dacorum was 1.14 miles. In 2015, only 6% of people surveyed in Dacorum reported walking

¹⁴⁰ Hertfordshire County Travel Survey 2015- Dacorum District Profile

<https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/county-travel-survey/dacorum-district-profile.pdf>

¹⁴¹ Hertfordshire County Travel Survey 2015- Dacorum District Profile

<https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/county-travel-survey/dacorum-district-profile.pdf>

¹⁴² Census 2011 Table – CT0015EW

¹⁴³ Census 2011 Table - CT0015EW

¹⁴⁴ Census 2011 Table - CT0015EW

to work (compared to 7% in Hertfordshire). In contrast, 64% of people reported walking to school (compared to 44% in Hertfordshire). This was the highest in the county¹⁴⁵.

Dacorum has a relatively high self-containment rate, with 37% of residents working within Dacorum in 2015¹⁴⁶. A high self-containment rate is commonly used as a measure of the sustainability of journeys to work. The borough also has a low level of net out-commuting. The Council's aim is to maintain a high self-containment rate and keep net out-commuting low¹⁴⁷.

B.12.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for development to reduce the need to travel and to encourage sustainable transport, in particular through 'Policy CS1 Distribution of Development' and 'Policy CS8 Sustainable Transport'. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. The new Local Plan will be able to ensure that additional new development, beyond that allocated in the Core Strategy and Site Allocations DPD, occurs in the most sustainable locations in order to reduce the need to travel and is designed to enable and encourage sustainable travel modes such as walking, cycling and use of public transport. In the absence of the new Local Plan these issues may not be given the same level of consideration.

B.12.4 Issues and opportunities

- Pressures due to population growth which leads to increasing levels of traffic, which in turn exacerbates congestion, particularly during peak times.
- All the key roads in south-west Hertfordshire are under pressure from heavy levels of traffic, and associated congestion, which has adverse effects on air quality, quality of life and the local economy.
- Bus services are not adequately linked between Hemel Hempstead rail station, Maylands and Hemel Hempstead town centre.

¹⁴⁵ Hertfordshire County Travel Survey 2015- Dacorum District Profile

<https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/county-travel-survey/dacorum-district-profile.pdf>

¹⁴⁶ Hertfordshire County Travel Survey 2015- Dacorum District Profile

<https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/county-travel-survey/dacorum-district-profile.pdf>

¹⁴⁷ Dacorum Core Strategy (paragraph 11.5)

- The walking and cycling network generally meets current demand however there are localised issues, such as congestion on some routes putting people off using those routes. Routes to stations in particular are considered to be inadequate
- Use planning obligations to secure improvements to public transport.
- Providing and maintaining safe and available infrastructure for healthy pursuits – cycleways, dedicated walkways.
- Requiring green travel plans in large new developments.
- Expansion of Luton Airport could put increased pressure on M1, motorway junctions and wider road network
- Provision of infrastructure to enable the increased use of sustainable modes of transport (e.g. cycle parking facilities, electric vehicle charging points)
- Make developments permeable to provide improved opportunities for walking and cycling
- There may be increased noise pollution as a result of expansions of Luton and Heathrow airports.

B.12.5 Sustainability appraisal objectives and sub-objectives

To develop in sustainable locations

- To reduce the need to travel, particularly by private car, through closer integration of housing, jobs and services
- To enable and encourage walking, cycling and the use of public transport
- To ensure that services and facilities are accessible by sustainable modes of transport
- To encourage provision of new and support existing local centres
- To encourage well-designed mixed-use developments in the heart of urban areas, create viable and attractive town centres that have vitality and life, and discourage out-of-town developments

Economic Factors

B.13 Economy, employment and education

B.13.1 Key policy context

The NPPF identifies that, as part of achieving sustainable development, planning has an economic role, to build a *“strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth, innovation and improved connectivity; and by identifying and coordinating the provision of infrastructure”*. One key aspect of this is making it easier for jobs to be created in cities, towns and villages.

In order to support the objective of building a strong, competitive economy, the NPPF recommends that local planning authorities should set out an economic strategy that promotes sustainable economic growth; facilitate local and inward investment to match the strategy and anticipated development needs; support existing business sectors and identify priority areas for economic regeneration.

The NPPF highlights the importance of supporting a ‘prosperous rural economy’ with planning policies being required to enable : *“the sustainable growth and expansion of all types of business in rural areas, both through conversion of existing buildings and well-designed new buildings”*. Part of this is promoting the retention and development of local services and community facilities within villages.

Local authorities should also seek to ensure the vitality of town centres as recommended in the NPPF. It should be recognised that as the heart of our communities, it is important to support the viability and vitality of local town centres.

Accompanying the NPPF is the Planning Practice Guidance, which specifically covers housing and economic development needs assessments and housing and economic land availability assessments.

At a county level the Economic Development Strategy for Hertfordshire (2009-2021) outlines how the county will build on its strengths and opportunities, and meet the challenges it faces. The five key economic objectives are: creating a vibrant, low carbon economy; stimulating enterprise, innovation and inward investment; developing a well-skilled workforce; providing quality locations and infrastructure; and creating vibrant towns and vibrant communities. The Strategy sets out economic priorities up to 2021, including developing skills and promoting social inclusion. This Strategy embodies a large part of the Counties Employment Strategy and Workforce Development Plan.

Within Hertfordshire, the southwest Hertfordshire Economy Study (2016) forecasts what the future economy in the region may look like; highlighting areas (sectors and locations) of growth.

In terms of education, the NPPF emphasises the importance that the Government places of education and ensuring that there are sufficient school places available to meet existing and future demand. The NPPF states that: *“local authorities should take a proactive, positive and*

collaborative approach to meeting this requirement, and to development that will widen choice in education. They should:

- *Give great weight to the need to create, expand or alter schools; and*
- *Work with schools promoters to identify and resolve key planning issues before applications are submitted”.*

B.13.1.1 Relevant plans, policies and programmes

- Economic Development Strategy for Hertfordshire 2009-2021
- East of England Forecasting Model (2013)
- Southwest Hertfordshire Economy Study (2016)
- Southwest Hertfordshire Economy Study Update (2019)
- Hertfordshire Schools Expansion Programme
- Dacorum Employment Land Availability Assessment (Draft) (2017)
- Dacorum Enterprise and Investment Action Plan 2017-2020
- Dacorum Tourism Strategy 2015-2017
- Loss of Employment Space in Hertfordshire, 2019
- South West Hertfordshire Retail and Leisure Study 2018
- South West Hertfordshire Further Retail Study 2020

B.13.2 The current situation

B.13.2.1 Economy

There were a total of 82,700 economically active people within Dacorum between July 2019 and June 2020. During this period, 77,700 were in employment which equates to 877.0% of the working population being in employment. This is on par with regional and national averages (78.3% and 76.2% respectively). The number of self-employed was 14,800 with the remaining 62,900 comprising of employees. In total 2,600 people were unemployed across the Borough¹⁴⁸.

In recent years the manufacturing sector in Hertfordshire has declined significantly. Around a quarter of jobs are now in knowledge based industries such as high-tech manufacturing, financial and business services (FBS), computing, communications industries, and research and development (R&D).

Based on information from 2013 on enterprise start-ups and closures, there was a net gain of businesses in the Borough following a loss experienced in 2009 and 2010 (**Table B.13-1**).

¹⁴⁸ Nomis, Labour Market Profile (Dacorum) 2020 Accessed 16/10/20

Broadly there has been an improvement in the number of company ‘births’ and a fall in the number of company closures over the period 2009 to 2013.

Table B.13-1: Birth and Death of Enterprises in Dacorum 2009 - 2013¹⁴⁹

	2009	2010	2011	2012	2013
Births	745	690	840	775	960
Deaths	825	715	725	775	785
Net change	-80	-25	+115	0	+175
Active	7,300	7,275	7,360	7,435	7,730

B.13.2.2 Employment

The number of employee jobs¹⁵⁰ in the Borough fell during the recession (2008-09), but recovered from 2010 and by 2013 job numbers were around the same as in 2006. Between 2013 and 2014 job numbers further increased by 4,000 (see **Table B.13-2**). Up to 2036, it is expected that employment will continue to grow annually by 0.6% from 2013 levels¹⁵¹.

The Hertfordshire County Travel Survey 2015 reported that 37% of Dacorum residents work within the Borough, with 23% working in other districts within Hertfordshire, 23% working in London and 15% working in an adjacent county¹⁵².

Table B.13-2: Employee job numbers 2006-2014¹⁵³

2006	2007	2008	2009	2010	2011	2012	2013	2014	Net change 2006-2014
58,800					57,200	59,000	58,700	62,700	+3,900

The structure of the economy has changed since 2000 in terms of the number of employee jobs by sector, with services dominating the local economy (**Table B.13-3**). The proportion of employees working in manufacturing in Dacorum (5.5%) is lower than in Hertfordshire (6.3%), the East of England region (8.4%) and in England (8.3%). The largest sectors for Dacorum are wholesale; retail; professional, scientific & technical; education; and health. The changing structure of the economy implies that the role of knowledge-based industries is becoming more important in Dacorum, as it is nationally.

¹⁴⁹ Source: Business Demography 2013 from ONS Data source: <http://www.ons.gov.uk/ons/publications/reference-tables.html?edition=tc%3A77-357041>

¹⁵⁰ The number of employee jobs is defined as ‘the number of jobs held by employees and excludes the self-employed, Government supported trainees and HM Forces.

¹⁵¹ South West Hertfordshire Economy Study (2016)

¹⁵² Hertfordshire County Travel Survey 2015- Dacorum District Profile

<https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/county-travel-survey/dacorum-district-profile.pdf>

¹⁵³ Source: Office for National Statistics (ONS). 2006 figures from the Annual Business Inquiry (ABI), 2010-2014 figures from the Business Register and Employment Survey (BRES). The BRES has now replaced the ABI.

Table B.13-3: Employee jobs by industry group in Dacorum (2014)¹⁵⁴

Sector	Number of employee jobs	%
Agriculture and energy	300	0.4
Manufacturing	3,400	5.5
Construction	2,900	4.7
Services:	56,000	89.4
Wholesale	5,200	8.8
Retail	7,000	11.2
Information & communication	5,200	8.3
Professional, scientific & technical	6,400	10.1
Education	5,900	9.4
Health	5,200	8.3
Other services	20,846	33.8

Based on the Claimant Count¹⁵⁵ (Table B.13-4), Dacorum's unemployment rate in October 2020 was very high (5.3%). This rate is somewhat lower than that in England and the East of England and is the same as the overall rate for in Hertfordshire. Unemployment rates at all area levels in 2020 are significantly higher than previous years which can be explained by the economic disruption caused by Covid-19. Prior to this, Dacorum's unemployment rate showed a slight increase 2015-2019 and followed the same trend as other South West Hertfordshire authorities and trends for East of England and England.

Table B.13-4: Claimant Count (unemployment %)¹⁵⁶

	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20
Dacorum	1.1	1.2	1.1	1.5	5.3
Hertsmere	1.2	1.2	1.4	2	5.9
St Albans	1.1	1.2	1.3	1.5	4.3
Three Rivers	0.9	0.9	1.4	1.7	4.9
Watford	1.4	1.4	2.1	2.5	6.9
Hertfordshire	1.1	1.1	1.3	1.8	5.3
East of England	1.2	1.3	1.6	2.1	5.7
England	1.8	1.9	2.1	2.8	6.6

The October 2020 Claimant Count showed that Dacorum's male and female unemployment rate was very similar to the Hertfordshire average:

¹⁵⁴ Dacorum Borough Council (2017) Delivering Success: Authority Monitoring Report & Success on the Dacorum Development Programme 2015/16 <http://www.dacorum.gov.uk/docs/default-source/strategic-planning/authority-monitoring-report-2015-16.pdf?sfvrsn=4>

¹⁵⁵ The Government's preferred measure of unemployment is the Labour Force Survey, however statistics are not published at district council level.

¹⁵⁶ Office for National Statistics

Table B.13-5: Male and female unemployment rates (%)¹⁵⁷

	October 2018		October 2019		October 2020	
	Male	Female	Male	Female	Male	Female
Dacorum	1.2	0.9	1.8	1.3	6.3	4.4
Hertfordshire	1.6	1.1	2.0	1.6	6.2	4.3

The Claimant Count also showed that:

- Unemployment amongst those aged 18-24 in Dacorum rose from 1.1% in October 2016 to 5.3% in October 2020, though it remained below the England rate (6.6%) and was the same as the Hertfordshire figure. Although 2020 unemployment figures show a divergence from previous years due to Covid-19, the data for 2016-2019 shows that Dacorum's unemployment rates are changing in line with national and regional rates.
- Long term unemployment (people claiming JSA for over a year) was 0.2% in 2017/18, compared to the national average of 3.6%.
- There are no wards in Dacorum with very high levels of unemployment. In 2017/18 the highest rate recorded was 5.3% (in Highfield ward, Hemel Hempstead). Unemployment in Markyate, Flamstead & Gaddesden was lowest in Dacorum at 0.2%¹⁵⁸.

The number of unemployed people in the UK is much higher than stated in the Claimant Count. Not everyone who is unemployed is eligible for, or claims, JSA. Many unemployed people (especially women) are not eligible for JSA, because they have a partner who works and/or because of their financial position. While most recipients of JSA are classified as unemployed, some fall into the 'employed' or 'economically inactive' categories.

A fuller and more accurate measure of unemployment at district council level can be gained from the Annual Population Survey (**Table B.13-6**). According to this measure, unemployment in Dacorum is well below the regional average, similar to the Hertfordshire figure and broadly similar to the average in surrounding and nearby local authorities. Unemployment in Dacorum is now back to its pre-recession level.

¹⁵⁷ Office for National Statistics

¹⁵⁸ <https://fingertips.phe.org.uk/> Accessed 15/10/20

Table B.13-6: Annual Population Survey: unemployment (%)

	July 2007- June 2008	July 2010- June 2011	July 2012- June 2013	April 2013- March 2014	April 2014- March 2015	April 2015- March 2016
Dacorum	3.5	5.4	5.2	4.4	3.9	3.4
Hertsmere	4.0	5.8	5.5	4.9	6.3	4.1
St Albans	2.9	4.6	5.0	3.7	2.8	2.8
Three Rivers	3.3	6.6	6.0	4.9	N/A	2.9
Watford	4.4	7.7	4.9	5.3	3.4	4.2
Aylesbury Vale	3.4	5.2	5.9	4.4	3.7	3.3
Chiltern	3.3	4.1	4.9	4.1	3.6	2.7
Central Bedfordshire	3.2	5.8	5.8	4.9	3.7	3.2
Hertfordshire	3.7	6.4	5.4	4.6	4.3	3.2
East of England	4.2	5.2	6.5	5.8	4.9	3.8

B.13.2.3 Education

According to the 2011 Census, 18.8% of people aged 16 and over in the Borough had no qualifications, compared to 18.2% in Hertfordshire and 22.5% in the East of England. The percentage of people with Level 2 qualifications¹⁵⁹ in Dacorum was 16.1% (compared to 15.7% in Hertfordshire and 15.2% for England) and just under 31% of the Borough's population had Level 4 or more qualifications¹⁶⁰ (compared to 32.1% in Hertfordshire and 27.4% in England)¹⁶¹.

Although adult education qualification levels in Dacorum are above average for Hertfordshire and England, there are still local skills shortages, particularly in terms of basic numeracy skills and specialist skills within certain employment sectors.

In terms of school qualifications, in the academic year of 2015/16, 63.1% of pupils at Key Stage 4 attained a Level 2 in Dacorum Borough, an increase from 62.2% in the year 2010/11. This is slightly lower than in Hertfordshire county (64.6% of pupils in 2015/16 compared to 66.9% in 2010/11)¹⁶².

In 2013/14, 1,630 people in the Borough were participating in apprenticeships, an increase from 2010/11 when there were 1,150¹⁶³. In academic year 2015/16 there were 950 apprenticeship starts in the Borough¹⁶⁴.

¹⁵⁹ Five or more GCSEs at A* to C grade including English and Maths

¹⁶⁰ Degree level or higher

¹⁶¹ Hertfordshire Education and Lifelong Learning Profile (Dacorum District)

<http://atlas.hertsliis.org/las/profiles/profile?profileId=119&geoTypeld=15&geolds=26UC> (accessed 25/04/16)

¹⁶² Due to methodological changes, the academic year of 2013/14 figures are not directly comparable to the previous ones. National results are not yet available for 2014/15 however, 53.4% of pupils in England attained Level 2 qualification in the academic year 2013/14.

<http://atlas.hertsliis.org/las/profiles/profile?profileId=119&geoTypeld=15&geolds=26UC> (accessed 25/04/16)

¹⁶³ Hertfordshire Education and Lifelong Learning Profile (Dacorum District)

<http://atlas.hertsliis.org/las/profiles/profile?profileId=119&geoTypeld=15&geolds=26UC> (accessed 25/04/16)

¹⁶⁴ <http://atlas.hertsliis.org/profiles/profile?profileId=119&geoTypeld=>

B.13.2.4 School provision

Hertfordshire County Council is responsible for ensuring there are sufficient school places for residents within Dacorum. HCC commission the places from existing schools. All new schools now need to be academies or free schools, approved by the Secretary of State.

In line with national trends, Hertfordshire experienced a period of falling demand for primary school places between 2000 and 2007. The national and local situation has now changed: demand for places has increased and will increase further.

As of 2020, Dacorum has 51 primary schools, 8 secondary schools, 4 special needs schools and 1 college.

As of mid-2018-19, there was a 5%+ surplus for primary school places in the Borough for 2018/19 in most areas, although a shortage of places has been identified in the south of the Borough in Bovington, Tring Town, Hemel Hempstead West and Hemel South East¹⁶⁵. Looking at future capacity demand relating to new housing developments in Dacorum, there is a need for 14 Form Entry (FE) (with a 4 FE reserve) of additional primary provision at a cost of £46.5 million (not including land costs). This is primarily expected to come from the development of new schools in Hemel Hempstead and St Albans which will enable the use of existing latent capacity in the surrounding towns and villages¹⁶⁶.

A number of primary school expansions and redevelopment of existing secondary schools has already taken place in order to meet the demand for schooling. The Local Plan includes plans for two primary schools and a secondary school in Berkhamsted and two primary schools and a secondary school in Tring.

With respect to secondary school places, current published figures indicate that the Borough has a shortage of school places in Tring and Berkhamsted and a surplus (+5%) in the Hemel Hempstead area until 2020/21. An additional pupil yield of 13.1 FE is forecast as a result of new housing developments within Dacorum. This capacity is expected to be met through the utilisation of capacity within existing secondary schools with potential need for extensions to schools in some cases¹⁶⁷.

There are also a number of independent schools in Dacorum, such as in Hemel Hempstead, Berkhamsted and Tring, which serve children from within the Borough and surrounding districts.

Dacorum currently has some deficits in the provision of Children's Centres within Berkhamsted South, Warners End and Chaulden, and Grovehill and Woodhall¹⁶⁸.

¹⁶⁵ "Meeting the rising demand for school places: Summer 2018/19". Herts CC

<https://www.hertfordshire.gov.uk/services/schools-and-education/at-school/school-planning/school-planning>
Accessed 15/10/20

¹⁶⁶ DBC (2015) Issues Paper: Providing Homes and Community Services (Update)

¹⁶⁷ DBC (2015) Issues Paper: Providing Homes and Community Services (Update)

¹⁶⁸ <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/infrastructure-delivery-plan-update--jan-2014.pdf?sfvrsn=0>

B.13.3 The likely situation without the plan

The existing Core Strategy provides the strategic framework for economic development in the Borough, in particular through 'Policy CS14 Economic Development', 'Policy CS15 offices, Research, Industry, Storage and Distribution' and 'Policy CS16 Shops and Commerce'. Without a new Local Plan, the Core Strategy policies would still remain, along with the existing DM policies saved from the previous Local Plan and therefore there would not be a policy vacuum in this area. The NPPF was updated in 2019, and significant weight can continue to be given to the majority of adopted policies where they remain fully consistent with national policy. There are however a small number of policies which are not fully consistent with the new NPPF and less weight can currently be given to these. If the borough is unable to demonstrate a sufficient supply of housing or that housing is not being delivered to a sufficient level each year, then those policies most important to determining the planning application will be considered out-of-date. This is usually only remedied through a review of the Local Plan. . The new Local Plan will be able to ensure that economic development is planned to meet the updated needs of the area. Without the new Local Plan, any new development that results through planning applications on unallocated sites, rather than sites allocated in the Local Plan is likely to result in uncoordinated development that fails to meet all needs and does not link new development with appropriate new supporting infrastructure.

B.13.4 Issues and opportunities

- Maintaining a strong employment base is essential for the future prosperity of the area.
- Providing a range of employment sites, including ones that will be attractive to inward investment.
- Providing incubator units and units with shared facilities, e.g. reception and meeting facilities etc. Local Plan to identify suitable locations.
- Using planning obligations used to enhance existing educational facilities – including allocating land for new schools where required.
- Providing a range of employment sites that will be attractive to knowledge based industries
- Expanding or creating new primary and secondary schools to ensure there are enough school places to support the growing population
- Providing facilities and services to support the improvement of GCSE attainment in schools.
- Ensuring that educational opportunities are available to provide the training and skills necessary to support Dacorum's local economy.
- Aiming to reduce levels of out-commuting.
- Strengthening the retail offering of the Borough in order to reduce out-flows of retail spending and support the local economy.

B.13.5 Sustainability appraisal objectives and sub-objectives

Achieve sustainable levels of prosperity and economic growth:

- To support an economy in the Borough which draws on the knowledge base, creativity and enterprise of its people
- To promote and support economic diversity, micro, small and medium sized enterprises, community-based enterprises and local investment
- To support the economy with high quality infrastructure and a high quality environment
- To improve the competitiveness of the rural economy
- To promote the role of town centres as centres for sustainable development providing services, housing and employment, drawing on the principles of urban renaissance
- To strengthen the Borough's retail offering in order to reduce outflow of retail spending
- To encourage complementary hierarchy of retail centres and promote cohesive economic development
- To ensure local residents have employment opportunities and access to training
- To encourage local provision of and access to jobs
- To reduce levels of out-commuting
- To enable the provision of new and enhanced educational facilities
- To provide training that will help people acquire the skills needed to find and remain in employment

Appendix C Assessments of Options

During the development of the Draft Local Plan the Council have considered a range of options relating to the level of growth to be included in the Plan and for the spatial distribution of that growth. This appendix provides details of the SA that was undertaken at the different stages, adding to the summaries of the SA which are provided in Section 5 of the Interim SA Report.

Appendix C.1 provides information on the SA which was undertaken alongside the development of the Issues and Options paper in November 2017.

Appendix C.2 provides information of the additional growth and strategy options which have been considered during the post Issues and Options stage.

C.1 Issues & Options - November 2017

C.1.1 Introduction

As part of the consultation on Issues and Options in November 2017 the Council considered a range of options relating to the level of housing growth over the Local Plan period and the spatial strategy for how future growth in the Borough could be accommodated.

The SA Working Note (October 2017) which accompanied the Issues and Options consultation provided assessments of the growth and spatial strategy options (reasonable alternatives) against each of the SA objectives. Summaries of these assessments are provided in Section C.1.2 The full SA Working Note is available at the following weblink:

<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/new-single-local-plan>

In relation to options beyond those relating to housing growth and spatial distribution, at the Issues and Options stage the Council used the consultation to request input views from stakeholders. Where appropriate, within the discussion on individual Issues in the Issues and Options Paper the Council picked up any 'reasonable alternatives' in terms of the approach to be taken in the Local Plan process to address the issues identified (e.g. the proposed approach to meeting future jobs growth). The questions throughout the Issues and Options Paper were worded to enable respondents to put forward what they considered to be additional reasonable alternatives for consideration.

C.1.2 Growth Options

Each of the options considered in the Issues and Options Paper were assessed against the SA objectives.

The options considered at this stage were as follows:

- Option 1a: Draft Government Housing Growth figure (13,800 new homes (602 dpa)). Focus on three towns.
- Option 1b: Draft Government Housing Growth figure (13,800 new homes (602 dpa)). Greater focus at Hemel Hempstead.
- Option 1c: Draft Government Housing Growth figure (13,800 new homes (602 dpa)). Spread more evenly across the Borough.
- Option 2a: Locally assessed need figure (17,400 new homes (756 dpa)). Focus on three towns.
- Option 2b: Locally assessed need figure (17,400 new homes (756 dpa)). Greater focus at Hemel Hempstead.
- Option 2c: Locally assessed need figure (17,400 new homes (756 dpa)). Spread more evenly across the Borough.
- Option 3: Upper Government Housing Growth figure (25,300 new homes 1,000-1,100 dpa). This option had no sub-options because to deliver this level of growth would require all potential sites to be taken forward.

The findings of the assessment are summarised in Table C.1-1.

Table C.1-1: Summary of Assessment of Growth Options

Option	SA Objectives														
	SA1 Biodiversity	SA2 Water	SA3 Flood risk	SA4 Climate change	SA5 Air quality	SA6 Soils	SA7 Resource efficiency	SA8 Historic environment	SA9 Landscape	SA10 Health and wellbeing	SA11 Sustainable locations	SA12 Community cohesion	SA13 Housing	SA14 Economy	SA15 Employment
Option 1a	x/?	x/?	-	x/?	x	x	x	?	x/?	✓/x	✓/?	✓/x	✓/x	✓	?
Option 1b	x/?	x/?	-	x/?	x	x	x	?	x/?	✓/x	✓/?	✓/x	✓/x	✓	?
Option 1c	x/?	x/?	-	x	x	x	x	?	x/?	✓/x	x	✓/x	✓/x	✓	?
Option 2a	x/?	x/?	-	x/?	x	x	x	?	x	✓/x	✓/?	✓/?	✓/✓✓	✓	✓
Option 2b	x/?	x/?	-	x/?	x	x	x	?	x	✓/x	✓/?	✓/?	✓/✓✓	✓	✓
Option 2c	x/?	x/?	-	x/?	x	x	x	?	x	✓/x	✓/?	✓/?	✓/✓✓	✓	✓
Option 3	x/?	x/?	-	x/?	x	xx	x	?	xx	✓/x	✓/?	✓/?	✓✓	✓	✓

All the options required the delivery of the c.10,940 homes on existing and planned sites within settlement boundaries that were consistent with existing planning policies (the Urban Capacity sites). In terms of the SA/SEA this meant that there were a range of effects against each SA/SEA objective that were consistent across all options, which meant that the ‘scoring’ used was not always able to pick up the differences in effects between some options. At the option level there were also some effects that were consistent across all the sub-options (i.e. Option 1a, 1b and 1c under the main Option 1), which meant that differentiating the effects between the sub-options was not always possible.

Notwithstanding the above the assessments identified the main differences in effects between the options to provide information to inform the development of the Local Plan.

In general terms the option for the lowest level of housing growth (Option 1) performed best against the environmental SA/SEA objectives as it would require less house-building on greenfield sites and less water consumption, fewer additional cars on the roads etc., that would result from an increased local population. The highest level of growth (Option 3) performed the worst against the environmental objectives for the opposite reasons. The

assessment did however identify some benefits of the higher level of growth against the environmental objectives as the larger developments that would be required to deliver the growth could provide opportunities for environmental enhancements. The assessments for Option 2, which has growth between Options 1 and 3, identified less-extreme effects compared to the other options both in terms of the positive and the negative effects.

In terms of the social and economic SA objectives, in general terms the higher level of growth (Option 3) performed the best as it would result in housing levels that would provide a number and range of homes to meet future needs of the Borough, particularly in relation to affordable housing. The increased population would also help to support the local economy and the new large developments would provide new facilities and infrastructure for use by the Borough as a whole. The lowest level of housing growth in Option 1 would not be able to deliver this level of benefits. The assessments did however identify that the high levels of growth under Option 3 could put strain on existing services and infrastructure, to the detriment of all residents, both existing and new. As for the environmental objectives, the assessments for Option 2 identified less-extreme effects compared to the other options.

For Option 1 and Option 2, three different growth distributions were considered as sub-options. Options 1a and 2a had a proposed distribution based on the three main towns in the Borough; Options 1b and 2b had a Hemel Hempstead focus; and Options 1c and 2c had a distribution spread more evenly across the Borough. However, the sub-options did not relate to the distribution of all the housing growth for the particular option, but just for the additional sites in the Green Belt needed on top of the new homes inside the settlement boundaries (the Urban Capacity Sites).

Given the strategic nature of the assessment it was therefore difficult for the SA/SEA to differentiate the scoring provided between the sub-options under a particular main option. The assessment commentary did however pick up some differences between the sub-options in relation to some of the SA/SEA objectives. These differences related to how the distribution of the additional development in the Green Belt over and above the 'urban capacity sites' would affect the achievement of the SA/SEA objectives for biodiversity, landscape, community cohesion, housing, sustainable prosperity and employment and skills. These differences related to how the distribution of the additional development in the Green Belt over and above the 'urban capacity sites' would affect the provision of Suitable Alternative Natural Greenspace (SANGs) which would help to reduce recreational pressure on the Chilterns Beechwoods Special Area of Conservation at the Ashridge Estate; the impacts on the setting of the Chilterns AONB; the new opportunities, but also pressures, on the infrastructure of the settlements receiving large new developments; meeting the housing needs in the different settlements; maintaining the viability of local services and businesses in the different settlements; and finally how the new development would relate to the future new job provision in the Borough.

C.1.3 Site Options – November 2017

In addition to the consultation on the Issues and Options paper and its accompanying SA Working Note, at the same time the Council undertook consultation on the Schedule of Site Appraisals. This was also accompanied by an SA Working Note in which each of the sites that have been included in the Schedule of Site Appraisals were assessed against the objectives in the SA Framework.

The Schedules included sites in the Green Belt or Rural Area that were on the edge of the towns and large villages and had a potential capacity of 50 dwellings or more as well as some sites that could deliver employment development, including mixed-use development.

The full assessments of these sites and a summary of the assessments are provided in the Schedule of Site Appraisals SA Working Note which is available at the following weblink:

<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/new-single-local-plan>

C.2 Additional Spatial Strategy and Growth Options Considered

This sub-appendix includes the assessment of the Spatial Strategy and Growth Options which have been considered during the development of the Dacorum Draft Local Plan (2020 - 2038) Emerging Strategy for Growth. These growth options are based upon those that originally featured in the Issues and Options Consultation document. The Issues and Options growth proposals were based around 3 options;

- Option A- Focus growth on the 3 main towns (Hemel Hempstead, Berkhamsted, and Tring);
- Option B- Focus growth on Hemel Hempstead;
- Option C (i & ii) Spread growth across the six main settlements;
 - o Option Ci: Spread across the six main settlements (low growth at villages);
 - o Option Cii: Spread across the six main settlements (high growth at Bovingdon and Kings Langley);
- Option D (i & ii) New settlement alongside growth at the 3 main towns;
 - o Option Di: New settlement in north-west of Borough
 - o Option Dii: New settlement at Bovingdon; and
- Option E Higher growth option

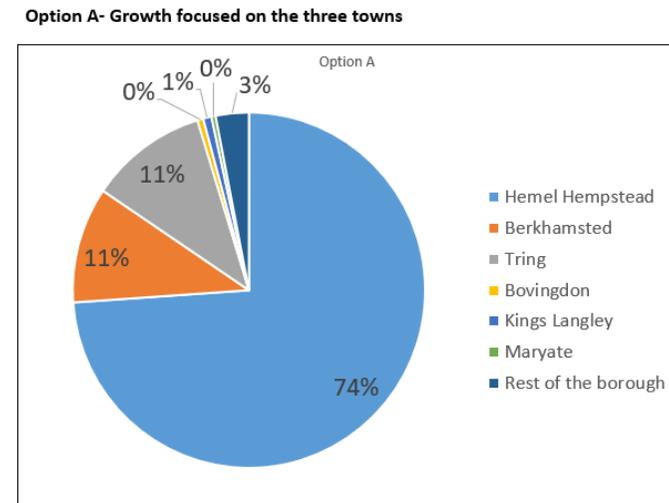
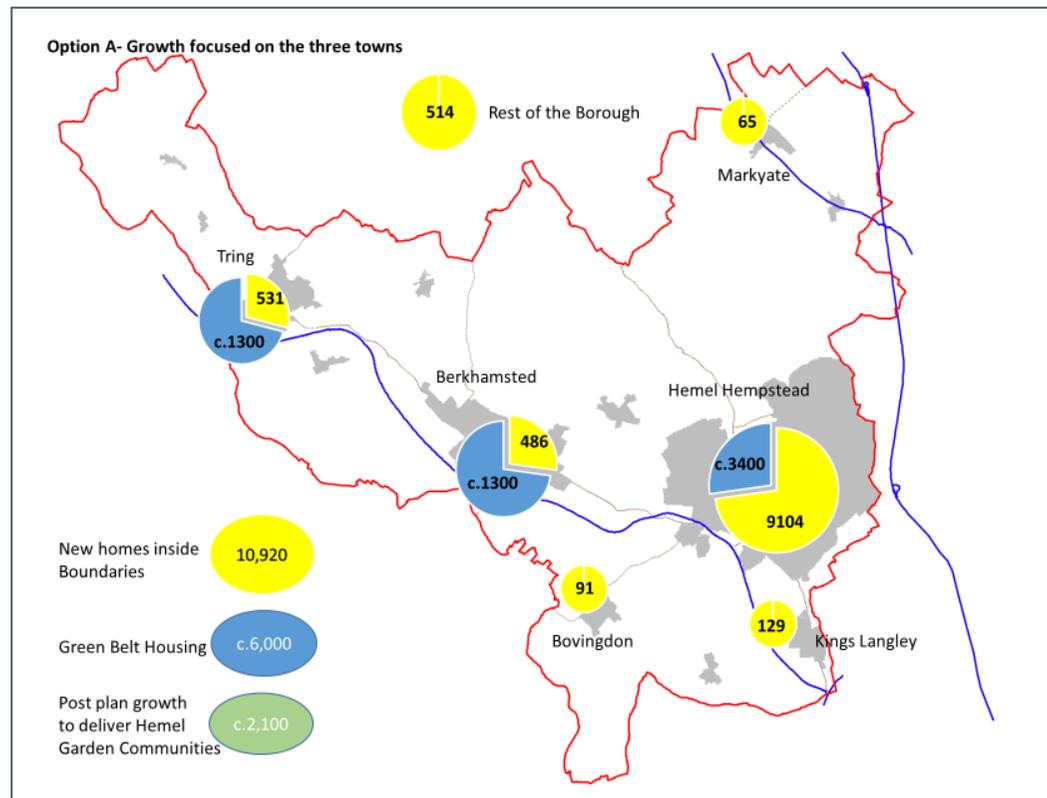
For continuity DBC have sought to retain the Issues and Options spatial distributions with the preferred development requirement (housing and employment figures), where it has been possible (i.e. accounting for land availability). Therefore, growth was apportioned based on a percentage basis (broken down by Urban and Green land) across each settlement. Details for each option are provided below.

DBC Narrative for Option A- Focus on the 3 towns

This option looks to apportion growth in and around the three main towns in Dacorum broadly in line with the prevailing settlement hierarchy. In this scenario Hemel Hempstead would continue to be the centre for significant development as the principal town. The inclusion of sites in Hemel Hempstead will help to regenerate the town and continue to provide development to support existing services by bringing vacant and/or underused land back into use. For Berkhamsted and Tring new development is provided in line with their respective role and function in the Borough.

With this option, land would be safeguarded in order to deliver the longer term growth in accordance with the aspirations for Hemel Garden Communities, which is to delivery 5,500 homes up to 2050.

As with all other options this approach includes the identified urban capacity as base assumption.

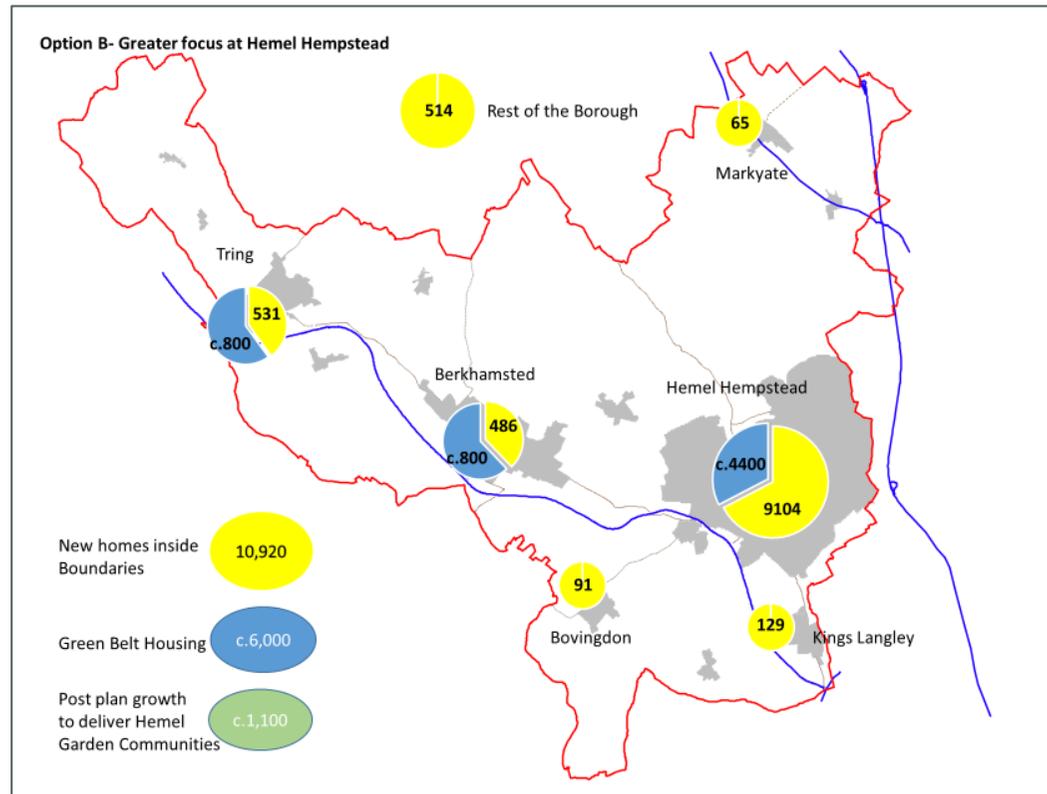


DBC Narrative for Option B- Focus on Hemel Hempstead

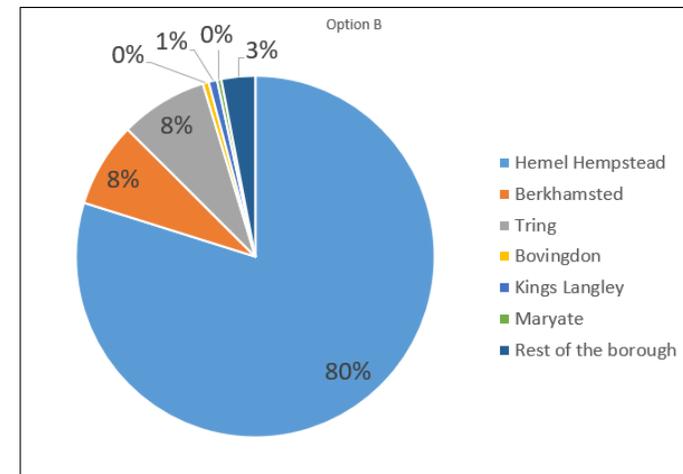
This option looks to focus more development at Hemel Hempstead, the principal settlement in the borough. Development at Berkhamsted, and Tring is reduced but maintained at levels broadly consistent with the prevailing role and function of these locations.

The implications for Hemel Hempstead is that further Green Belt development is required. In the market towns Green Belt land is required but this is reduced by about a third. As more growth is sought to be delivered at Hemel Hempstead in the plan period, less land would be required to be safeguarded for longer term aspirations than with Option A.

As with all other options this approach includes the identified urban capacity as base assumption.



Option B- Greater focus at Hemel Hempstead



DBC Narrative for Option C- Evenly spread across the Borough (2 variations)

This option looks to distribute growth more evenly around the borough, specifically looking at new allocations through predominantly green belt releases at Bovingdon, Kings Langley and Markyate.

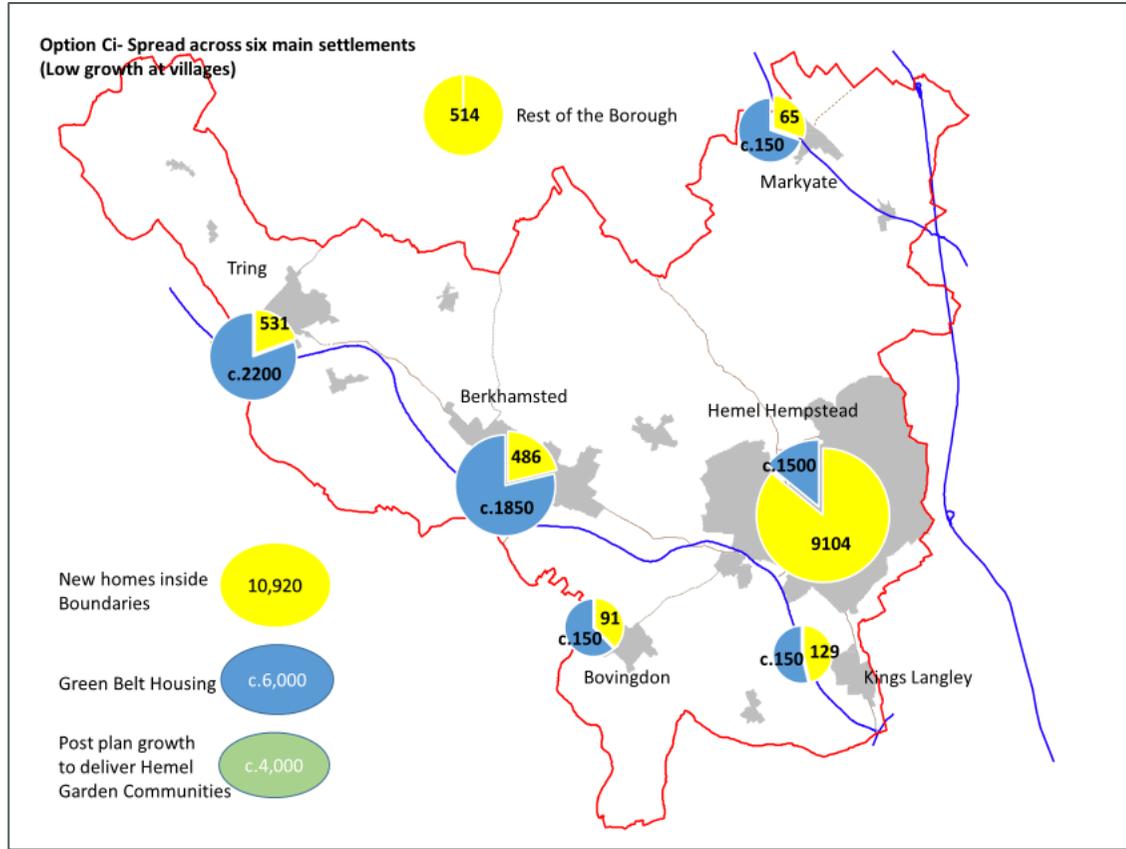
This strategy seeks to deliver a more balanced approach to growth across the borough. It reduces the level of growth to be delivered at Hemel Hempstead (although more land would be safeguarded to deliver longer term aspirations for Hemel Garden Communities than with Options A and B), and compensates for this with higher growth at Berkhamsted and Tring, while also seeking to deliver small, but proportionate scales of growth at the villages of Bovingdon, Kings Langley and Markyate. Under this scenario Hemel Hempstead continues to accommodate the majority of new growth given its position as the most sustainable settlement in the borough, with Tring and Berkhamsted playing a more important role as key locations for growth. The larger villages are considered for their potential to deliver a proportionate scale of growth in locations where the range of services and facilities are more limited but could be enhanced through new development.

There are two variations being considered under this option.

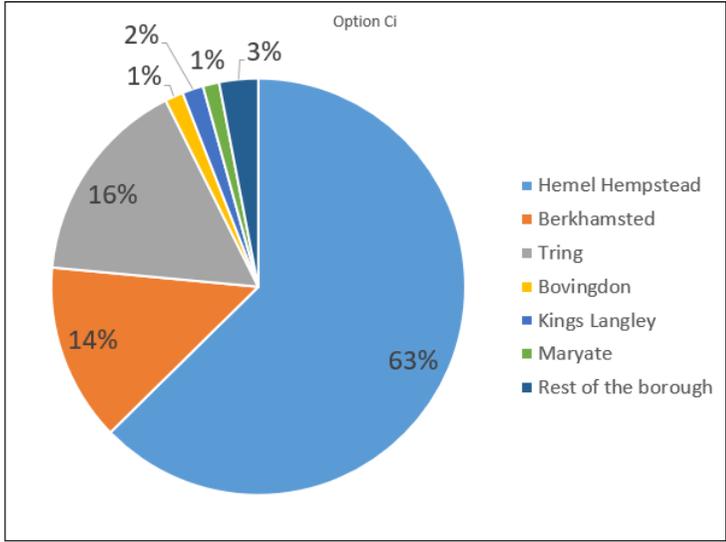
The first variation (Option Ci) is to allow a small scale of additional growth at the three villages, allowing the ability to deliver proportionate improvements such as new public open spaces to serve existing and new communities, while not significantly impacting the ability of existing infrastructure to cope. This results in higher levels of growth at Berkhamsted and Tring, taking account of identified constraints and opportunities associated with these settlements.

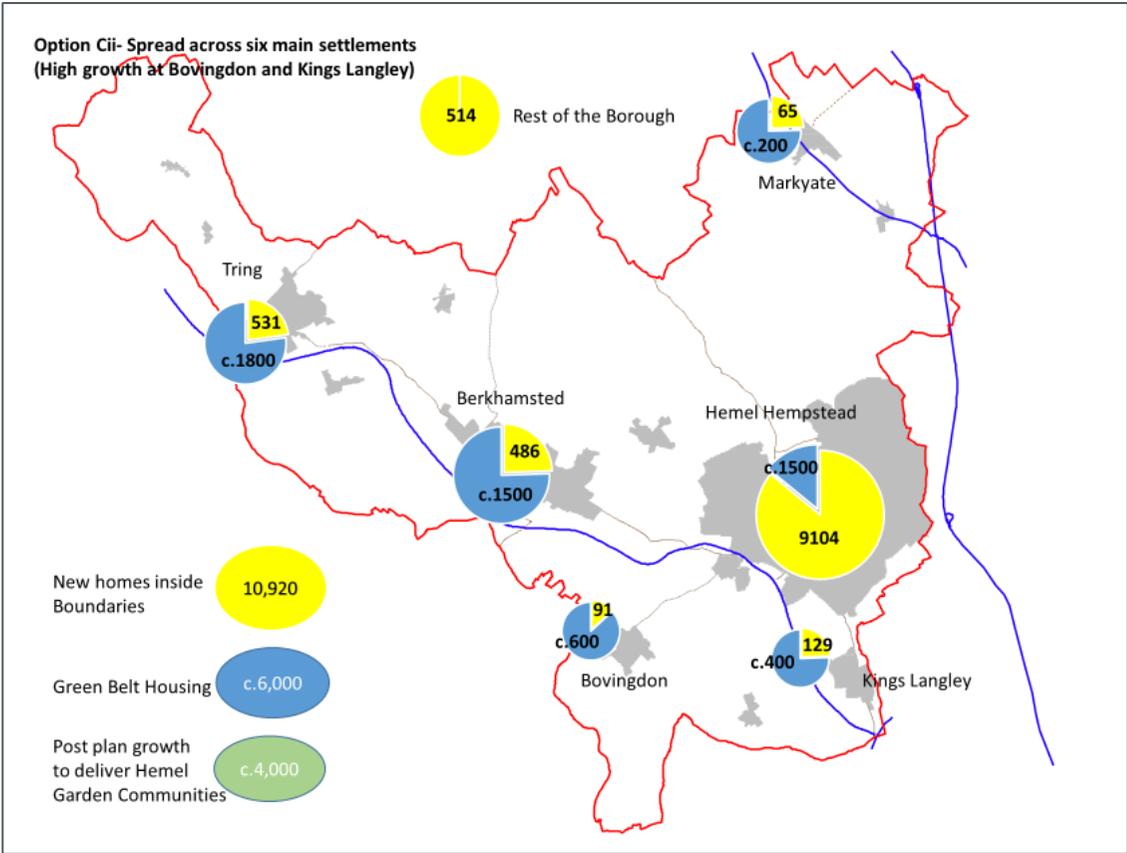
The second variation (Option Cii) is to allow a larger scale of growth at Bovingdon and Kings Langley, where such growth could deliver significant new infrastructure such as a new education facilities or avail of high quality public transport links/connections. This variation results in slightly less growth at Berkhamsted and Tring than with Option Ci, but remains significant in scale when compared to Options A and B.

As with all other options this approach includes the identified urban capacity as base assumption.

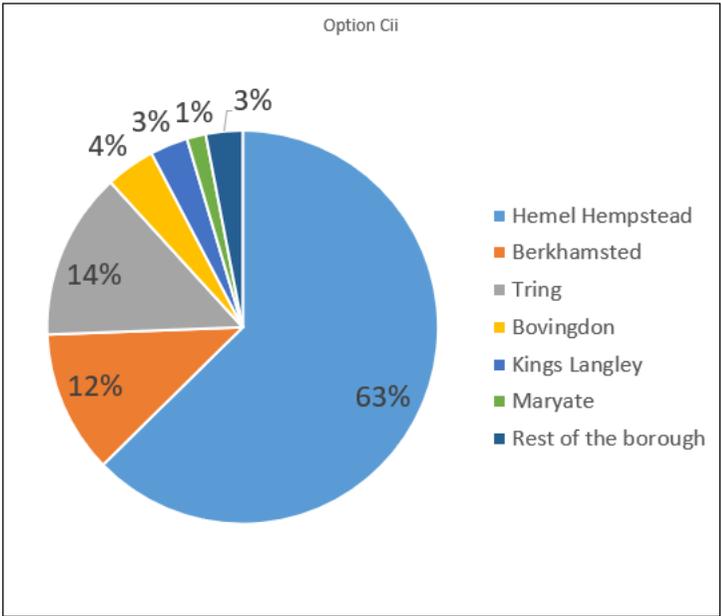


Option Ci- Spread across six main settlements (Low growth at villages)





**Option Cii- Spread across six main settlements
(High growth at Bovingdon and Kings Langley)**



DBC Narrative for Option D – New settlement alongside growth at the three main towns.

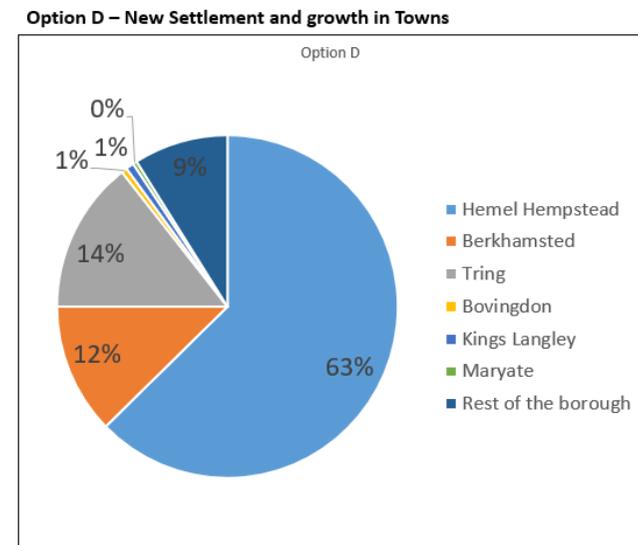
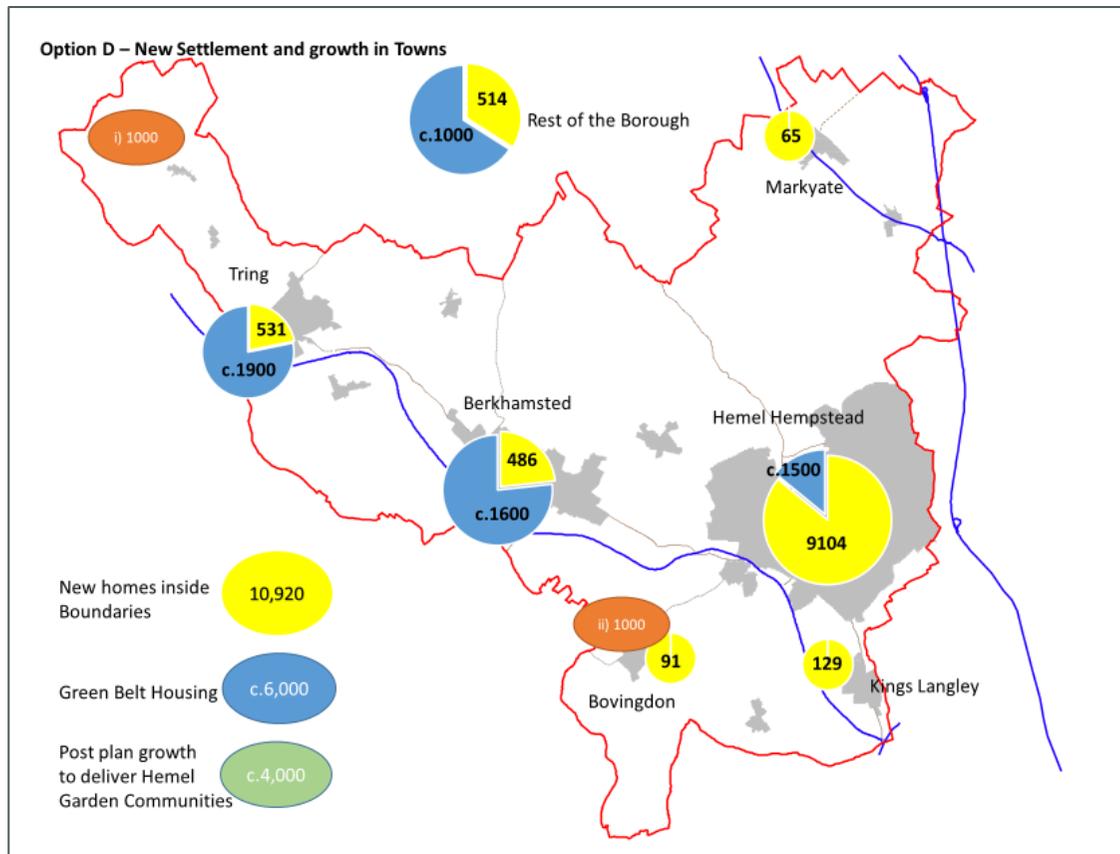
This option seeks to deliver some of the planned growth through the delivery of a new settlement.

This approach effectively delivers the same scale of growth at the 3 main towns as with Option Cii above, with any remaining growth delivered through a new settlement option. The approach will likely result in slower housing delivery than with Option C, but benefits include the comprehensive delivery of new growth alongside significant new infrastructure, rather than more piecemeal development as with Option C.

There are two variations being considered for Option D. The first variation looks at delivering a new settlement not constrained by the Green Belt or AONB, on predominantly rural land. It would be located on land to the north west of Tring and north east of Aylesbury. There are a number of small villages and hamlets in the area and significant new infrastructure would be needed to link the site to higher order centres, the railway station at Cheddington and the A41.

The second variation looks at delivering a new settlement on predominantly brownfield land at Bovingdon Airfield in the Green Belt. The site is of a scale that could deliver a stand-alone new settlement, or act as a major urban extension to Bovingdon, utilising the existing services and facilities to support earlier growth. In both instances, significant new infrastructure would need to be delivered which would likely benefit new and existing communities. As with the first variation, significant new infrastructure would be needed to link the site to more sustainable forms of transport (Bovingdon is remote from any train station) and to the A41.

As with all other options this approach includes the identified urban capacity as base assumption.



DBC Narrative for Option E - Growth at 1,100 dpa

This scenario tests a strategy that exceeds the Borough's own development requirements. In order to deliver this strategy a mix of all previous options can be considered where these focus higher levels of growth in different locations. Options would need to consider at least two of the following in combination:

- Higher growth at Hemel (Option B)
- Spread more evenly across the remaining settlements (Option Ci and Cii)
- New settlement (Option Di and Dii)

A higher growth option would assist with housing delivery and supply, but could place an unnecessary burden on infrastructure.

The effects arising from each of the options above have already been considered, however it is likely that any negative impacts would be worsened through additional growth and the combination of Options B-D to meet this.

Dacorum Spatial Strategy and Growth Options

SA Objective		<p>Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)</p>
1	Biodiversity	<p>Context: The Chilterns Beechwoods SAC Site Improvement Plan (Natural England, 2015) identifies ‘Public Access/Disturbance’ as a threat to the SAC Feature ‘S1083 Stag beetle’. The identified mitigation is to ‘Reduce visitor impact on dead wood’. The HRA of the Local Plan also identifies that general ‘wear and tear’ from recreational users of the Ashridge Estate is an issue. The provision of new open space, potentially including Suitable Alternative Natural Greenspace (SANGs), in large new developments in Dacorum will be needed in order to contribute towards this mitigation.</p> <p>The Site Improvement Plan also identifies ‘Air Pollution: impact of atmospheric nitrogen deposition’ as a pressure on the SAC features of ‘H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)’, ‘H9130 Beech forests on neutral to rich soils’, and ‘S1083 Stag beetle’. The mitigation identified is for Natural England to ‘Establish a Site Nitrogen Action Plan’. Any measures in the Dacorum Local Plan that can reduce nitrogen deposition on the SAC, particularly transport related deposition, will help to mitigate this issue. The proximity of the Tring Woodlands SSSI component of the Chilterns Beechwoods SAC to the A41 is of particular relevance in this context.</p> <p>Generic effects for all options</p> <p>The significance of the effects on biodiversity of delivering all the options will be dependent on the biodiversity value of the development sites, irrespective of whether they are greenfield land or previously developed land (which can have a high biodiversity value). Mitigation measures will need to be put in place in order to minimise any impacts on biodiversity and geodiversity associated with new developments.</p> <p>Any development of greenfield land could have adverse impacts on habitats and species due to landtake, habitat fragmentation, urban pollution issues etc. The higher the level of housing provision the greater the amount of greenfield land required.</p> <p>However, new development does provide opportunities for habitat enhancement and improved habitat connectivity, particularly at larger sites where there will be the greatest opportunities for providing new green infrastructure. The national and local policy requirement for new development to provide a net gain in biodiversity further reinforces this point. It could be that the higher levels of growth provide increased opportunities over the lower levels. The provision of SANGs as part of large new developments would help to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at current ‘honeypot’ locations such as the Ashridge Estate.</p> <p>Ultimately, the type and level of the effects will be dependent on the biodiversity value of the sites which are taken forward for development, as well as the opportunities which they provide for enhancements.</p>

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)																												
	<p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 360 1883 443"> <thead> <tr> <th colspan="2">Option A</th> <th colspan="2">Option B</th> <th colspan="2">Option Ci</th> <th colspan="2">Option Cii</th> <th colspan="2">Option Di</th> <th colspan="2">Option Dii</th> </tr> </thead> <tbody> <tr> <td>x/?</td><td>✓</td> <td>x/?</td><td>✓</td> <td>x/?</td><td>✓</td> <td>x/?</td><td>✓</td> <td>x/?</td><td>✓</td> <td>x/?</td><td>✓</td> </tr> </tbody> </table> <p>Options A-D would require development of c.6,000 homes on greenfield sites in the Green Belt, with associated adverse effects on biodiversity, although the requirement for new development to provide a net gain in biodiversity could result in positive effects against this objective.</p> <p>Options A-D require the development of large greenfield sites in the Green Belt, with locations varying between options, which could deliver improved green infrastructure, including SANGs, and result in some enhancements to biodiversity, as well as potentially reducing recreational pressure on the Chilterns Beechwoods SAC. Option Dii differs slightly as it includes a large non-greenfield site (Bovingdon airfield), although it should be noted that previously developed sites can have some biodiversity value.</p> <p>Options Ci and Cii would result in higher levels of growth in the Green Belt at Berkhamsted and Tring than Options A and B which, given that these two towns are in the closest proximity to the Chilterns Beechwoods SAC could mean that Options Ci and Cii would result in higher levels of recreational pressure on the SAC at Ashridge,. However, it should be noted that the level of pressure will be dependent on the amount of alternative recreational space (in the form of SANGs or other new open space provision) which are provided by new developments, or as part of wider open space provision through the Local Plan.</p> <p>A similar position exists for Options Di and Dii, which also require higher levels of growth at Berkhamsted and Tring than Options A and B. Option Di adds further to this, as a new settlement to the north-west of Tring would also be in relatively close proximity to the Chilterns Beechwoods SAC.</p> <table border="1" data-bbox="595 975 808 1058"> <thead> <tr> <th colspan="2">Option E (1,100dpa)</th> </tr> </thead> <tbody> <tr> <td>x/?</td> <td>✓</td> </tr> </tbody> </table> <p>The level of proposed growth under this option would require the development of c.8,800 new homes on greenfield sites throughout the Borough, with associated adverse effects on biodiversity.</p> <p>The option would require the development of large sites in the Green Belt, which should deliver improved green infrastructure and result in net gains in biodiversity. A new settlement, if included in the option, would be expected to deliver sufficient alternative recreational space if required to offset such impacts on the Chiltern Beechwood SAC.</p> <p>Mitigation: A Habitats Regulations Assessment is being undertaken to examine whether the Local Plan will have adverse effects on any European sites, most notably the Chilterns Beechwoods SAC. If likely significant effects are identified there will be a need to develop mitigation measures to reduce or avoid such effects. This could include the provision of SANGs. These mitigation measures will be included</p>	Option A		Option B		Option Ci		Option Cii		Option Di		Option Dii		x/?	✓	Option E (1,100dpa)		x/?	✓										
Option A		Option B		Option Ci		Option Cii		Option Di		Option Dii																			
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Option E (1,100dpa)																													
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	<p>in Local Plan policies. Whilst this mitigation will be focused on effects on the SAC it could also help to mitigate wider effects, such as those on SSSIs within the Borough and other designated and non-designated sites which are important for biodiversity.</p> <p>Amongst others, the proposed Local Plan policies covering Landscape Character and Chilterns Area of Outstanding Natural Beauty; Protection of Sites; Protected Species and Priority Species and Habitats Policy; Biodiversity Net Gain; Chilterns Beechwoods Special Area of Conservation; Development on the Ashridge Estate; Protection and Enhancement of the River Character and Water Environment; Protection from Environmental Pollution;- Tree Retention and Protection; and Open Land will provide the policy framework to help to mitigate the potential adverse effects associated with the potentially high levels of housing development, as well as seeking opportunities for enhancements.</p> <p>The Scoping Report identified the opportunities to link the 'Living Landscape' areas of the Gade Valley and Berkhamsted Common, as well as to provide an appropriate landscape/ecological buffer to Ashridge in the face of planned growth of Hemel Hempstead. Transport corridors such as the A41 often represent key wildlife corridors and provide opportunities for enhanced habitat linkages.</p>
2	<p>Water</p> <p>Context: In 2014/15 the household water use in Dacorum was estimated to be 151.97 litres per head per day which was one of the highest within the County compared to other districts.</p> <p>Groundwater resources are now at or approaching full utilisation, and many rivers and streams including the Bulbourne, Gade and Ver suffer from unfavourable flow conditions due to climate change causing heavy rainfall and long dry spells which detrimentally impacts upon water quality and creates pressure on underground drainage systems. The Chilterns Chalk Streams are particularly susceptible to over abstraction and urban pollution. The Catchment Abstraction Management Strategy (CAMS) for the Colne catchment (Environment Agency, December 2007) identified that the underlying chalk aquifer is assessed as being 'over-abstracted'.</p> <p>Groundwater is a source of drinking water as well as maintaining the flow in many rivers. In order to protect these sources (e.g. wells, boreholes and springs used for public drinking water supply) the Environment Agency has defined groundwater Source Protection Zones (GSPZs) which are designed to protect individual groundwater sources from any activities that might cause pollution in the area. In this context they are used to inform pollution prevention measures in areas which are at a higher risk, and to monitor the activities of potential polluting activities nearby. A large proportion of the Borough is covered by GSPZs, with 'inner zones' north of Hemel Hempstead, at Berkhamsted and south-east of Tring.</p> <p>A Water Cycle Scoping Study was undertaken in 2010 (covering Dacorum BC, St Albans City & District Council, Three Rivers DC, Watford BC and Welwyn and Hatfield BC) to inform the preparation of Local Plans and provide evidence to support any policies that relate to water resources, supply and sewerage, wastewater treatment, flood risk, water quality and the wider water environment.</p> <p>In relation to water supply, the 'Hertfordshire Water Study 2017'¹⁶⁹ identifies that the availability of water resources in Dacorum is "<i>largely sufficient for 2021 but could require significant improvement by 2051, as with much of the county</i>".</p>

¹⁶⁹ Hertfordshire Water Study 2017: Infrastructure & Resources, Sub-catchment Solutions (2021 – 2051), ARCADIS, March 2017

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovington airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)														
	<p>In terms of waste water treatment capacity the Study identified that the main outcomes from the evaluation of need for Dacorum were as follows: <i>“Any development within the Upper Gade catchment by 2031, northwest of Hemel Hempstead, could significantly impact water quality and require sensitive planning; The indicative development areas around Berkhamsted are likely to require strategic intervention from 2031 onwards to accommodate the scale of projected growth within the Berkhamsted STW catchment; 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 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; and Focusing growth proposals on Hemel Hempstead could provide a greater number of unrestricted opportunities, utilising the capacity of the existing system and relieving pressure on Berkhamsted.”</i></p> <p>Generic effects for all options</p> <p>Any new housing development will put pressure on water resources. The higher the level of housing the greater the potential adverse effects will be. The effect is likely to become more significant over time as more dwellings are built and risk of periodic water shortages increase.</p> <p>New development could also result in the pollution of water course both during construction and when developments are occupied, as well as affecting groundwater resources, particularly if the development is in a SPZ. New development increases the potential for water pollution, associated with increased run-off from impermeable surfaces and the potential for sewer flooding in high rainfall events. The likelihood and level of such effects will be dependent on the specific development locations.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 834 1883 916"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">x</td> </tr> </tbody> </table> <p>The proposed level of housing development under Options A-D will result in additional pressure on water resources which could cause issues with potable water supply. The effect is likely to become more acute over time as more dwellings are built and the risk of periodic water shortages increases.</p> <table border="1" data-bbox="595 1054 808 1136"> <thead> <tr> <th>Option E (1,100dpa)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">x</td> </tr> </tbody> </table> <p>Providing 1,100 dpa would put additional pressure on water resources when compared to the housing levels proposed under Options A-D. As for those other options, this level of growth could cause issues with potable water supply, with the effect being likely to become even more acute over time as more dwellings are built and the risk of periodic water shortages increases.</p> <p>Mitigation: Amongst others, the proposed Local Plan policies covering Protection and Enhancement of the River Character and Water Environment; Protection from Environmental Pollution; and Sustainable Design and Construction (which limits residential indoor water consumption to 110 litres per person per day); Canalside Environment; and Sustainable Offsetting will provide the policy framework to help to mitigate the potential adverse effects on water quality and the availability of water resources that may arise from new development.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	x	x	x	x	x	x	Option E (1,100dpa)	x
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii										
x	x	x	x	x	x										
Option E (1,100dpa)															
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SA Objective		Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovington airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)												
3	Flood risk	<p>Context: The area of the Borough that lies in a flood risk zone is relatively small, and in terms of the larger settlements is mainly limited to areas close to the River Bulbourne in Berkhamsted; the River Bulbourne and River Gade in Hemel Hempstead; the River Gade/Grand Union Canal in Kings Langley; and the River Ver in Markyate.</p> <p>A Stage 2 Strategic Flood Risk Assessment (SFRA) undertaken in 2008 concluded that there were only three areas of the Borough at risk of flooding: Hemel Hempstead Town Centre; Moor End Road, Hemel Hempstead; and Two Waters Road (south of the roundabout), Hemel Hempstead. The study also suggested that land between the Grand Union Canal and the River Bulbourne in Berkhamsted would be severely inundated with water if a breach of the canal occurred. An updated Level 2 SFRA (draft February 2020)¹⁷⁰ includes detailed assessments of the potential Local Plan site allocations and identifies that certain sites are at risk from fluvial, surface water and groundwater flooding. This information will be used to inform the SA of site options.</p>												
		<p>Generic effects for all options: Building new developments may increase surface water flood risk in already poorly draining areas. This could have an impact on existing homes/businesses as well as new ones if not mitigated at the time of construction.</p> <p>Higher levels of growth may mean that there is an increased pressure to develop in areas at risk from flooding.</p> <p>The Two Waters area of Hemel Hempstead has potential flood risk issues.</p>												
		<p>Options A-D – Growth at 922 dpa</p> <table border="1"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>?</td> </tr> </tbody> </table> <p>No predicted effects. Options A-D could be delivered without the need to build new dwellings in flood risk zones or where there are areas of greater flood risk to locate the residential element in the low risk areas of a site. However under Option Di there are potential flood risk issues associated with the area to the north-west of Tring, which is partly in Flood Zones 2, 3a and 3b.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	-	-	-	-	-	?
		Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii							
-	-	-	-	-	?									
<table border="1"> <thead> <tr> <th colspan="2">Option E (1,100 dpa)</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>?</td> </tr> </tbody> </table> <p>No predicted effects. The option could be delivered without the need to build new dwellings in flood risk zones, or where there are areas of greater flood risk to locate the residential element in the low risk areas of a site - although as for Option Di, if Option E were to require development in the area to the north-west of Tring, which is partly in Flood Zones 2, 3a and 3b, there could be potential flood risk issues.</p>	Option E (1,100 dpa)		-	?										
Option E (1,100 dpa)														
-	?													

¹⁷⁰ Dacorum Borough Level 2 SFRA Draft Report, JBA Consulting, February 2020

SA Objective	<p>Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)</p>
	<p>Mitigation: Local Plan proposals should avoid development in areas of flood risk (e.g. Flood Zones 2 and 3a / 3b), applying the sequential approach to site selection so that development is, as far as reasonably possible, located where the risk of flooding (from all sources) is lowest, taking account of climate change and the vulnerability of future uses to flood risk (DCLG).</p> <p>The proposed Local Plan policies Sustainable Design and Construction; Flood Risk and Protection; and Protection and Enhancement of the River Character and Water Environment; should ensure that flood risk is not increased elsewhere and new development avoids Flood Zones 2 and 3 – unless it is a compatible use.</p> <p>Opportunities for the provision of Sustainable Drainage Systems (SUDs) should be maximised in new developments.</p>
4	<p>Climate change</p> <p>Context: In 2017 transport contributed 38.6% of greenhouse gas emissions within the Borough (an increase from 30% in 2005 and 32% in 2010). These were almost entirely attributed to road transport (99%). Dacorum Borough Council declared a Climate Emergency in July 2019 in an effort to respond to these challenges. This commits it to work towards reducing carbon emissions across the full range of council activities to net zero by the end of the budget year 2029/30. The Council also resolved to ensure the new Local Plan and associated regulations when adopted contains all available measures to cut carbon emissions and reduce the impact on the environment.</p> <p>Levels of transport emissions will be dependent on where the new residents are employed. If the new housing simply results in increased levels of out-commuting then GHG emission increases could be high.</p> <p>Traffic modelling undertaken to date has identified the following key findings as a result of Local Plan Growth (based on higher housing requirement of 1,023 dpa): Increased delays at M25 Junction 20 in all time periods; Greater delays in the PM Peak in Hemel Hempstead in the Maylands area including the Green Lane/M1 J8 roundabout caused by re-routeing to access the north link road; Greater levels of PM peak congestion in the north of Hemel Hempstead along Redbourn Road as traffic re-routes to use the north Hemel link road; Congestion on A4147 towards Hemel Hempstead and the A414/Green Lane junction in PM peak; and Greater levels of congestion towards Chesham in PM peak, caused by changes to routeing in the buffer network.</p> <p>Generic effects for all options: Housing development will result in an increase in greenhouse gas (GHG) emissions from energy used in new housing and associated activities including increases in traffic. In relation to increased traffic, the levels of increased vehicle usage and miles travelled will be dependent of how close new developments are to existing services and facilities, as well as the type and level of new services and facilities provided by new developments, either on-site or through CIL and S106. Another key factor which will influence the levels of GHG will be the provision of walking and cycling infrastructure and public transport, which will enable the take-up of sustainable transport choices, always however dependent on individuals’ behavioural choices to make walking and cycling the ‘natural choice’ for shorter journeys, or as part of a longer one. Such infrastructure and provision should be provided from the outset of the occupancy of a new development in order to encourage and embed sustainable travel from the start of the developments being occupied.</p> <p>Growth in and around the Borough will place increased strain on the existing transport infrastructure. Traffic congestion is a problem, particularly in Hemel Hempstead and in order to reduce carbon emissions, there is a need to encourage walking, cycling and public transport as alternatives to the car.</p> <p>Development can help to mitigate and adapt to the impacts of climate change, through sustainable design and construction and reducing the need to travel, particularly by car. Larger new developments could provide district heating opportunities.</p>

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	<p>GHG emissions relating to travelling to work will be dependent on the location of new housing development in relation to current employment opportunities and whether suitable new employment opportunities are provided in order to reduce the need to commute.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 424 1883 512"> <thead> <tr> <th colspan="2">Option A</th> <th colspan="2">Option B</th> <th colspan="2">Option Ci</th> <th colspan="2">Option Cii</th> <th colspan="2">Option Di</th> <th colspan="2">Option Dii</th> </tr> </thead> <tbody> <tr> <td>x</td><td>?</td> <td>x</td><td>✓</td> <td>x</td><td>?</td> <td>x</td><td>?</td> <td>x</td><td>?</td> <td>x</td><td>?</td> </tr> </tbody> </table> <p>Options A-D require the delivery of the c.10,400 homes on existing and planned sites that are consistent with existing planning policies (such as existing allocations and the Urban Capacity sites). As a general rule these sites will be closer to facilities in the town and village centres and so should reduce the need to travel and provide the opportunities for sustainable modes of travel to be used, thereby reducing the growth in greenhouse gas emissions. The levels of take up of sustainable modes will however be dependent on infrastructure provision (e.g. cycle paths) and behavioural change and therefore effects for all options are uncertain.</p> <p>Hemel Hempstead is the most sustainable location in the Borough in terms of access to facilities, services and employment and therefore the options which require the higher levels of growth at Hemel Hempstead would be predicted to result in lower travel related greenhouse gas emissions when compared to options which require lower levels of growth at Hemel Hempstead. The percentage of overall development that would be provided at Hemel Hempstead under each option is as follows: Option A: 74%; Option B: 80%; Options Ci and Cii: 63%; and Option D: 63%. Option B would have the highest percentage of new development at Hemel Hempstead and therefore a minor positive effect has been identified against this objective.</p> <p>Options Ci and Cii seek to distribute development more evenly across the six main settlements, with less emphasis on developments at the higher order settlements than Options A and B. This would result in an increase in the need to travel to access services and facilities, with associated increases in greenhouse gas emissions. This would particularly be the case for Option Cii which directs more growth to Bovingdon (with its relatively poor public transport links) and Kings Langley (although Kings Langley is better served by public transport, including having a train station).</p> <p>Conversely, when compared to Option Ci and Cii, Options A and B require no release of Green Belt at the smaller settlements, with associated reductions in growth in greenhouse gas emissions if it means less distance to travel to access services and facilities.</p> <p>The new settlements under Options Di and Dii would both be some distance from major services and facilities and given the poor public transport links in the locality of these two potential new settlements (particularly for the area to the north-west of Tring under Option Di) would result in reliance on private cars, thereby resulting in increases in greenhouse gas emissions.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="595 1225 808 1297"> <tbody> <tr> <td>x</td> <td>?</td> </tr> </tbody> </table> <p>Under Option E there would be a need to release additional Green Belt land when compared to Options A-D. This would further increase the need to travel to access services and facilities with associated increases in greenhouse gas emissions. The levels of increase would depend</p>	Option A		Option B		Option Ci		Option Cii		Option Di		Option Dii		x	?	x	✓	x	?	x	?	x	?	x	?	x	?
Option A		Option B		Option Ci		Option Cii		Option Di		Option Dii																	
x	?	x	✓	x	?	x	?	x	?	x	?																
x	?																										

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		<p>on how this additional growth is delivered, for example if it were through higher levels of growth at Hemel Hempstead the increase is likely to be lower than if it were through a new settlement or through spreading development evenly across the borough's six main settlements.</p> <p>Uncertainties: Whilst it is inevitable that the delivery of housing growth will result in increased greenhouse gas emissions caused by the construction and occupation of the housing, given that building regulations do not require zero carbon homes, as well as through associated transport emissions, one major area of uncertainty relates to how any potential new roads that might be associated with new developments (for example a Northern Relief Road at Hemel Hempstead or a northern link route at Tring) would affect levels of greenhouse gas emissions. If they reduce congestion without resulting in increased traffic levels then they could have beneficial effects, but if they result in increased car use then they could have the opposite effect.</p> <p>If traffic is displaced from the town centres then measures should be taken to 'lock-in' the benefits, such as through the introduction of demand management measures (e.g. traffic calming and traffic restrictions). This would not only reduce traffic in the town centres but may also encourage the increased take up of walking and cycling in these 'now safer' areas. This would not only have positive effects in terms of reducing the growth in greenhouse gas emissions but would also have benefits for air quality, health and wellbeing, community cohesion and the local economy.</p> <p>Whilst the Local Plan can guide development to sustainable locations and provide policies that encourage the take up of sustainable modes of travel, the level of effects will ultimately depend on the take up of such measures by new and existing residents – based on individuals' personal preferences.</p> <p>Mitigation: In order to meet the Government aim of the UK being carbon neutral by 2050, Dacorum Borough Council's policies set out a commitment that all new development in Dacorum should be carbon neutral by 2030 and, in the meantime, must make significant improvements in CO₂ emissions reductions over and above the requirements of the Building Regulations.</p> <p>Amongst others the proposed Local Plan policies covering Climate Change Mitigation and Adaptation; Sustainable Design and Construction: Energy and Carbon Emissions Reductions in New Development, Stand-alone Renewable of Low Carbon Energy; Strategic Sites and District Heating opportunity Areas; Carbon Offsetting; Green Infrastructure; and Sustainable Transport will help towards minimising the growth in greenhouse gas emissions that would inevitably result for the scale of new development that will need to be provided in the Borough.</p> <p>The Local Plan will seek to balance the demand for homes and jobs and provide opportunities for people to work locally, thereby providing the potential for a reduced need to travel.</p>
5	Air Quality	<p>Context: Whilst overall levels of pollutants have decreased across the Borough there are some areas where annual mean nitrogen dioxide concentrations continue to exceed the relevant Air Quality Objectives. As a result, three Air Quality Management Areas (AQMA) have formally been declared within the Borough. These are at: AQMA No 1 Lawn Lane, Hemel Hempstead; AQMA No 2 London Road, Apsley; and AQMA No 3 High Street, Northchurch. In addition there are AQMAs outside the Borough which need to also be considered, including St Albans AQMA No. 2 adjacent to Junction 7 of the M1 in St Albans District and Tring Road AQMA in Aylesbury. It will need to be determined whether proposed new developments are likely to exacerbate the air quality issues in these specific areas. NB: the 2020 Dacorum Air Quality Status report identifies that "The AQMA at Northchurch has shown levels of NO₂ levels below the national objective for the last two years and if this situation continues the AQMA could be revoked in the early stages of the Local Plan period".</p>

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	<p>Generic effects for all options:</p> <p>Road transport emissions are the major contribution to the burden of air pollution encountered in the Borough. Building additional new homes will contribute to background emissions through an increase in vehicles on the road. During construction there are potential adverse effects on local air quality close to the development sites.</p> <p>Housing development will result in an increase in traffic levels, with associated implications for local air quality. The higher the level of housing the greater the potential effects will be. However, as for GHG, the levels of increased vehicle usage and miles travelled will be dependent of how close new developments are to existing services and facilities, as well as the type and level of new services and facilities provided by new developments, either on-site or through CIL and S106. Another key factor which will influence local air quality will be the provision of walking and cycling infrastructure and public transport, which will enable the take-up of less polluting transport choices, always however dependent on behavioural choices. Such infrastructure and provision should be provided from the beginning of a new development in order to encourage and embed sustainable travel from the outset of the developments being occupied.</p> <p>All options would include the 9,104 urban capacity sites within Hemel Hempstead, which alongside any additional Green Belt sites could result in the exacerbation of air quality issues at the two AQMAs with Hemel Hempstead (AQMA1, Lawn Lane and AQMA 2 London Road).</p> <p>As for GHG emissions, air pollution relating to travelling to work will be dependent on the location of new housing development in relation to current employment opportunities and whether suitable new employment opportunities are provided in order to reduce the need to commute.</p> <p>As the vehicle fleet is replaced over time by vehicles having reduced or zero emissions (particularly of NOx and particulates) so the contribution of traffic towards air quality issues will diminish.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 938 1883 1023"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">x</td> </tr> </tbody> </table> <p>Options A-D all require substantial amounts of new development through release of Green Belt, differing in locations between the options. The resulting increase in traffic is likely to result in adverse effects on local air quality. In particular for Options Di and Dii the likelihood of increased car use to access higher order services, as a result of their location away from the main towns and limited public transport provision, could result in exacerbation of air quality issues in the destination towns. Conversely the options which have the higher levels of housing development in the most sustainable locations (i.e. Options A and B) will reduce the need for private car use and therefore should result in lower levels of growth in airborne emissions from vehicles.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	x	x	x	x	x	x
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii								
x	x	x	x	x	x								

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		<table border="1" data-bbox="595 357 808 437"> <tr> <td data-bbox="595 357 808 389">Option E (1,100 dpa)</td> </tr> <tr> <td data-bbox="595 394 808 437">x</td> </tr> </table> <p data-bbox="595 456 1939 507">Compared to Options A-D, building a higher level of new homes will contribute to increased background emissions through an increase in vehicles on the road and a greater number of development sites.</p> <p data-bbox="595 520 1939 576">The higher levels of development in the Green Belt, and the increased levels of traffic which would result, have resulted in adverse effects being identified for this option.</p> <p data-bbox="595 592 1939 643">Uncertainties: See SA4 Climate Change for details of the uncertainty relating to the potential for new roads to be provided as part of larger developments.</p> <p data-bbox="595 659 1939 738">Mitigation: The proposed Local Plan policies covering Protection from Environmental Pollution (including lighting, noise, air quality, etc.); Sustainable Transport; Management of Roads; and Highway design and traffic management should help to ensure that local air quality is taken into consideration and mitigated.</p> <p data-bbox="595 754 1939 805">The Local Plan policies should not just seek to improve local air quality and not exacerbate conditions in the AQMAs, they should also take account of existing local air quality issues when selecting locations for sensitive developments (e.g. schools, care homes etc.).</p>						Option E (1,100 dpa)	x																
Option E (1,100 dpa)																									
x																									
6	Soils	<p data-bbox="595 823 1939 994">Context: Dacorum Borough covers a number of different soils. The predominant soilscape is ‘slightly acid loamy and clayey soils with impeded drainage’, which has moderate to high fertility. South-west Hertfordshire’s soils are mainly classified as grade 3 agricultural land, however there is some grade 2 agricultural land around Bovingdon, to the east of Tring and to the east of Hemel Hempstead. The Best and Most Versatile agricultural land is that classified as Grade 1, Grade 2 and Grade 3a. Whilst there is information available on the areas of Grade 2 land within the Borough (there is no Grade 1 land), there is not detailed Borough-wide information that differentiates between Grade 3a (BMV) and Grade 3b (not BMV) land.</p> <p data-bbox="595 1010 1939 1090">Generic effects for all options: Housing development on greenfield sites will result in soil sealing from new housing and associated infrastructure and in many cases the loss of agricultural land. The higher the level of housing the greater the amount of soil sealing that will result and the greater likelihood that areas of best and most versatile agricultural land will be lost to new development.</p> <p data-bbox="595 1106 1536 1129">Development on brownfield sites may provide opportunities for remediating contaminated land.</p> <p data-bbox="595 1145 931 1169">Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 1182 1883 1262"> <thead> <tr> <th data-bbox="595 1182 808 1214">Option A</th> <th data-bbox="815 1182 1028 1214">Option B</th> <th data-bbox="1034 1182 1247 1214">Option Ci</th> <th data-bbox="1254 1182 1467 1214">Option Cii</th> <th data-bbox="1473 1182 1686 1214">Option Di</th> <th data-bbox="1693 1182 1883 1214">Option Dii</th> </tr> </thead> <tbody> <tr> <td data-bbox="595 1219 808 1262">x</td> <td data-bbox="815 1219 1028 1262">x</td> <td data-bbox="1034 1219 1247 1262">x</td> <td data-bbox="1254 1219 1467 1262">x</td> <td data-bbox="1473 1219 1686 1262">x</td> <td data-bbox="1693 1219 1883 1262">x</td> </tr> <tr> <td data-bbox="595 1267 808 1310"></td> <td data-bbox="815 1267 1028 1310"></td> <td data-bbox="1034 1267 1247 1310"></td> <td data-bbox="1254 1267 1467 1310"></td> <td data-bbox="1473 1267 1686 1310"></td> <td data-bbox="1693 1267 1883 1310">✓</td> </tr> </tbody> </table> <p data-bbox="595 1270 1895 1294">Options A-D require the development of c.6,000 homes on greenfield sites in the Green Belt, with associated adverse effects on soils.</p> <p data-bbox="595 1310 1917 1390">The majority of any development at Bovingdon Airfield under Option Dii would be on previously developed land and would enable the remediation of any contaminated land, thus supporting this objective, although the majority of the Green Belt release under this option would still be related to greenfield sites – hence a split x/✓ assessment.</p>						Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	x	x	x	x	x	x						✓
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii																				
x	x	x	x	x	x																				
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		<table border="1"> <tr> <td>Option E (1,100 dpa)</td> </tr> <tr> <td>x/x x</td> </tr> </table> <p>The level of proposed growth under this option would require the development of c.8,800 new homes on greenfield sites throughout the Borough as well as some development on urban open spaces - with associated likely significant adverse effects on soils, through soil damage and sealing.</p> <p>Mitigation: The proposed Local Plan policy covering Protection from Environmental Pollution should help to ensure that the protection of soils is taken into consideration and mitigated. This includes where relevant the remediation of contaminated land in line with Environment Agency, Defra and Natural England Guidance.</p> <p>In addition to this, the Local Plan policy covering Development in the Rural Area encourages the effective use of land by re-using land that has been previously developed (brownfield land) in preference to using greenfield sites. Development on the best and most versatile agricultural land should also be avoided where possible.</p>	Option E (1,100 dpa)	x/x x										
Option E (1,100 dpa)														
x/x x														
7	Resource efficiency	<p>Context: Hertfordshire as a county currently has to use sites in Buckinghamshire and Oxfordshire in order to meet its waste management needs.</p> <p>In relation to waste water infrastructure engagement with Thames Water has concluded that there are no significant issues to delivering the scales of growth proposed for Dacorum. There will however inevitably be a need to deliver improvements and enhancements to the network/infrastructure in order to cope with future demand.</p> <p>The southern part of the Borough is located in the sand and gravel belt. The Hertfordshire Minerals Local Plan identifies mineral safeguarding areas in which known mineral resources of sand and gravel and brick clay will be safeguarded from unnecessary sterilisation by non-mineral development. This needs to be taken into consideration when planning for new development in order to prevent the sterilisation of mineral resources.</p> <p>Generic effects for all options: All new development will put demands on natural resources and result in increased waste generation. The higher the level of development the greater these levels will be, as will be the greater likelihood that developments may be located in areas which are within mineral safeguarding areas.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td>x</td> <td>x</td> <td>x</td> <td>x</td> <td>x</td> <td>x</td> </tr> </tbody> </table> <p>The level of housing development proposed under Options A-D would result in adverse effects against this objective due the high level of resource use and waste generation associated with the new housing.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	x	x	x	x	x	x
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii									
x	x	x	x	x	x									

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	<p>The level of growth under Options A-D would require some improvements to the local wastewater network and treatment works over the course of the plan period.</p> <table border="1" data-bbox="595 432 808 512"> <tr> <td data-bbox="595 432 808 464">Option E (1,100 dpa)</td> </tr> <tr> <td data-bbox="595 464 808 512" style="background-color: yellow; text-align: center;">x</td> </tr> </table> <p>The level of housing development proposed under this option would result in adverse effects against this objective due the high level of resource use and waste generation associated with the construction and occupancy of new housing.</p> <p>As with Options A-D, at this level of growth there would need to be some improvements to local wastewater treatment works after 2031.</p> <p>Mitigation: Amongst others the proposed Local Plan policies covering Sustainable Design and Construction and Sustainable Offsetting will help towards minimising the resources required to deliver new development and reducing the waste generated by the new development, as well as ensuring that there is sufficient infrastructure in place to cope with the increases associated with the potential levels of growth.</p>	Option E (1,100 dpa)	x
Option E (1,100 dpa)			
x			
8	<p>Historic environment</p> <p>Context: Dacorum’s cultural heritage is a key feature of the Borough. The local authority area covers a large area of the old ‘Hundred of Dacorum’ which dates back to the Saxon period. Many of the important heritage features and areas within Dacorum are recognised through historic environment designations. There are also a large number of non-designated heritage assets.</p> <p>The historic built environment, including heritage assets, is under pressure from development and regeneration and associated traffic congestion, air quality and noise pollution. This puts heritage assets at risk of neglect or decay. The threat of infilling and replacement with new buildings and the erosion of historic features in the public realm need to be carefully mitigated and managed.</p> <p>Generic effects for all options: New development has the potential to result in adverse effects on heritage assets and their settings and the wider historic environment. The significance of the effects on the historic environment of delivering these sites will be largely dependent on the nature of any heritage assets and their settings that are associated with the sites, as well as the scale and design of the new developments. In general terms, the higher the level of development the more likelihood there is for adverse effects on heritage assets across the Borough, as well as the magnitude of any such effects.</p> <p>Development may result in significant loss or erosion of the landscape or townscape character or quality, which is likely to also have an impact (direct and or indirect) upon the historic environment and people’s enjoyment of it.</p> <p>The higher the level of housing the greater the potential there is for adverse effects on the historic environment.</p>		

SA Objective	<p>Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)</p>													
	<p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 357 1883 435"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="background-color: yellow;">?</td> </tr> </tbody> </table> <p>Uncertain effects have been identified for Options A-D. No option specific effects have been identified which add to the generic effects identified above.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="595 555 808 639"> <tbody> <tr> <td style="background-color: yellow;">?</td> </tr> </tbody> </table> <p>Uncertain effects have been identified for Option E. The higher level of development compared to Options A-D increases the potential for adverse effects, but this remains dependent on the nature of any heritage assets and their settings that are associated with the sites, as well as the scale and design of the new developments.</p> <p>Mitigation: Amongst others the proposed Local Plan policies covering Development Affecting the Historic Environment; Heritage Assets with Archaeological Interest, Conservation Areas, Listed Buildings, Quality of Place and Design of Development; Quality of Place; Canalside Environment; and Height of Buildings will help towards minimising the effects on the historic environment, including on designated and non-designated heritage assets and their settings, as well as seeking to provide enhancements.</p> <p>Dacorum BC have in place a number of Conservation Area Appraisals which set out the special qualities and sensitivities of the Conservation Areas. These will be taken into account when considering sites and developing mitigation measures.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	?	?	?	?	?	?	?
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii									
?	?	?	?	?	?									
?														
9	<p>Landscape / Townscape</p> <p>Context: With 60% of the Borough being within the Metropolitan Green Belt, and the constraint that this brings, there is a challenge to identify a sufficient size and number of development sites to meet the Borough’s housing and employment needs whilst taking account of the role and function of the Green Belt.</p> <p>The majority of Dacorum falls within the ‘Chilterns’ national character area. A large section of this is protected, with approximately one third of the Borough being in the Chilterns Area of Outstanding Natural Beauty (CAONB). The AONB’s special qualities include the steep chalk escarpment with areas of flower-rich downland, woodland, commons, tranquil valleys, the network of ancient routes, villages with their brick and flint houses, chalk streams and a rich historic environment.</p> <p>Generic effects for all options: The significance of the effects on the landscape/townscape of delivering these sites will be dependent on the special qualities of the landscape/townscape associated with each of the sites and how the new development is accommodated within the landscape. New development would provide opportunities to improve the local townscape and public realm, particularly if the site is currently a poor contributor to the character of the local area.</p> <p>Constructing new dwellings is likely to result in some adverse effects on landscapes and townscapes, particularly if developments could adversely affect the setting of the AONB. The effects will be more significant once brownfield sites have been used up and houses will have to be built on greenfield sites in the Green Belt. The higher levels of growth would require increased levels of Green Belt release.</p>													

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)												
	<p>The higher the level of housing the greater the potential there is for adverse effects on the local townscapes and landscapes, including adverse effects on the setting of the Chilterns AONB which lies close to the three main towns of Berkhamsted, Hemel Hempstead and Tring as well as to the west of Markyate. Cumulative effects of development on the special qualities of the AONB will need to be considered when determining which development sites, and groups of sites, will be proposed for inclusion in the Local Plan, including the consideration of how adverse effects can be avoided or reduced.</p> <p>Development of the ‘urban capacity sites’ could provide the opportunity to improve local townscapes, depended to nature of the current use of the site.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 584 1883 667"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">x</td> </tr> </tbody> </table> <p>Options A and B do not require Green Belt release at Markyate, which is positive given Markyate’s location close to the AONB. They do however require Green Belt releases at Berkhamsted, Hemel Hempstead and Tring which could result in adverse effects on the setting of the AONB, given the close proximity of all three settlements to the AONB. The effects will be dependent on the scale of development and the location of development sites in relation to the AONB and particular landscape character areas.</p> <p>Option Ci and Cii require Green Belt release at the six main settlements, at different levels depending on the option, which could result in adverse effects on the setting of the AONB. As for Options A and B the effects will be dependent on the scale of development and the location of development sites in relation to the AONB and landscape character areas.</p> <p>Options Ci and Cii require development to be spread evenly across the borough, which would result in increased levels of development at the smaller villages compared to the other options. This could affect local landscape and ‘villagescapes’. These two options would result in higher levels of growth in the Green Belt at Berkhamsted, Markyate and Tring than Options A and B which may mean that there is a greater effect on the setting of the AONB at these locations. Conversely Options Ci and Cii require less Green Belt development at Hemel Hempstead which would mean less pressure on the AONB and landscape character areas at that location.</p> <p>Option D requires development of a new settlement in one of two potential locations which would alter the landscape of a part of the borough, in a manner that would be irreversible. The significance of the effects will be dependent on layout and design, including how the settlement is integrated into the existing landscape. Significance will also depend on how the new settlements would affect the setting of the Chilterns AONB.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	x	x	x	x	x	x
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii								
x	x	x	x	x	x								

SA Objective		Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovington airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)
		<div data-bbox="595 355 808 432" style="border: 1px solid black; padding: 2px;"> <p>Option E (1,100 dpa)</p> <p style="text-align: center; background-color: #FFD700;">x/x.x</p> </div> <p>This level of growth would require development on greenfield sites, including over c.8,800 on greenfield sites in the Green Belt, which could have associated adverse effects on local landscapes, tranquillity and light pollution and potential erosion of green links between some existing residential areas and the countryside.</p> <p>The effects related to this option would depend on how it is delivered in terms of the scale and location of the greenfield sites and how these relate to the scenarios under Options A-D above. The effects would mirror those identified for whichever of the various options, or combinations of options, on which Option E would be based, with those effects being slightly magnified to take account of the c.17% increase in the number of dwellings required to be built on greenfield sites in the Green Belt.</p> <p>This option may have an increased impact of the setting of the Chilterns AONB as it would be likely to require significant development at Berkhamsted, Markyate, Tring and to the north of Hemel Hempstead, all of which are either adjacent or in close proximity to the AONB. Impacts on the AONB could be offset by the delivery of a new settlement away from the AONB, however this would be likely to result in a major change in the landscape in and around that location.</p> <p>Mitigation: Amongst others the proposed Local Plan policies covering Sites of Importance to Nature Conservation; Landscape Character and Chilterns Area of Outstanding Natural Beauty (CAONB); Open Space; Extensions to Dwellings in the Green Belt and Rural Area; Replacement Dwellings in the Green Belt and Rural Area; Quality of Place; Quality of Place and Design of Development; and Height of Buildings will help towards minimising the effects of new development on the local landscapes and townscapes of those areas where new development will be focused.</p> <p>In addition, masterplans and Local Plan requirements for the chosen key sites will look at mitigation and enhancement measures in greater detail (i.e. tree planting and landscaping, location of development within the site, building heights etc.).</p>
10	Health and wellbeing	<p>Context: Local health and wellbeing priorities within the Borough are increasing levels of physical activity in adults and subsequently reducing levels of obesity; and continuing to reduce the proportion of the population smoking.</p> <p>The Borough contains a diverse range of leisure and sports facilities, including public and private outdoor sports facilities for children and adults as well as allotments and gardens.</p> <p>Within the Dacorum countryside, there is an extensive rights of way network equating to over 360 miles, with well-publicised paths and routes including the Chilterns Country Walks and the Markyate Health Walks as well as routes along the Grand Union Canal.</p> <p>Generic effects for all options: Effects on the health objective would be dependent on how the different levels of growth are delivered in terms of a variety of factors such as: the efficient delivery of health care in a manner that ensures that existing services are not over-stretched; the ease of access to existing health facilities and recreation opportunities, the design of developments to enable the take up of active travel modes; provision of a range of homes to meet the needs of all groups in society etc. The provision of new social and community facilities as part of new developments can provide health and wellbeing benefits for both new and existing residents.</p>

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	<p>An increasing population will lead to additional pressure on secondary healthcare services in the Borough. The increasing proportion of older people in the Borough’s population is also likely to have put pressure on secondary healthcare needs, as they are likely to utilise healthcare services more than others.</p> <p>New open space and green infrastructure provided through new developments would help to encourage healthy recreation activities and support improvements in health and wellbeing across the Borough. Large new developments would provide the greatest opportunities for the provision of new green infrastructure, as well as the enhancement of existing green infrastructure.</p> <p>In addition, the Council has identified that new development would need to support moves towards increased cycling and walking. Enabling an increased take-up in these active travel modes will contribute towards benefits in health and wellbeing.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="593 619 1883 708"> <thead> <tr> <th colspan="2">Option A</th> <th colspan="2">Option B</th> <th colspan="2">Option Ci</th> <th colspan="2">Option Cii</th> <th colspan="2">Option Di</th> <th colspan="2">Option Dii</th> </tr> </thead> <tbody> <tr> <td style="background-color: #90EE90;">✓</td> <td style="background-color: #FFFF00;">?</td> </tr> </tbody> </table> <p>The provision of the level of housing growth under Options A-D will help to meet the housing needs of the local population and reduce issues of overcrowding and stress related to inadequacy of housing provision. There would also be the potential to provide the range and types of housing to meet the needs of the elderly and disabled population.</p> <p>The housing proposed under Options A-D would put pressure on existing healthcare facilities, with associated adverse effects. However, if new neighbourhoods were to be created as part of this growth option there would be opportunities for the provision of new healthcare facilities that could help to tackle some current deficits for the existing population.</p> <p>The different distributions of growth under each option will influence how the option performs against this objective in terms of the provision of new open space and recreation facilities, as well as improvements which enable increased levels of walking and cycling, For example the allocation of new Green Belt developments at Bovingdon, Kings Langley and Markyate under Option Ci would allow for the provision of new public open space at these villages which could be used by existing and new residents. Similarly, larger developments at the Borough’s towns, the levels of which varies between options, could deliver some large areas of new open space.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="593 1110 808 1193"> <tbody> <tr> <td style="background-color: #90EE90;">✓</td> <td style="background-color: #FFFF00;">?</td> </tr> </tbody> </table> <p>The provision of this level of housing growth will help to meet the housing needs of the local population and reduce issues of overcrowding and stress related to inadequacy of housing provision. There would be a greater potential than Options A-D to provide the range and types of housing to meet the needs of the elderly and disabled population.</p>	Option A		Option B		Option Ci		Option Cii		Option Di		Option Dii		✓	?	✓	?	✓	?	✓	?	✓	?	✓	?	✓	?
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	<p>The housing proposed under this option would put pressure on existing health care facilities. However, if new neighbourhoods were to be created as part of this growth option there would be opportunities for the provision of new healthcare facilities that could help to tackle some current deficits for the existing population.</p> <p>Uncertainties: See SA4 Climate Change for details of the uncertainty relating to the potential for new roads to be provided as part of larger developments.</p> <p>Mitigation: Amongst others the proposed Local Plan policies covering Sustainable Transport; Walking and Cycling; Health Facilities; Health Impact Assessments, Sport and Leisure; Open Space Provision; Community Facilities; Community Stewardship and Management and Protection from Environmental Pollution will help towards ensuring that the health and wellbeing of the Borough's existing and future residents are taken into consideration when planning for new development, including through the provision of sufficient healthcare and leisure and recreation facilities, enabling the uptake of active travel modes and providing access to open spaces.</p>
11	<p>Sustainable locations</p> <p>Context: Hertfordshire's Traffic and Transport Data Report 2018 identifies that traffic within the Borough is forecast to increase by 6% by 2021 from 2017 levels and by 17.4% by 2031.</p> <p>Mainline rail is a good travel option for Dacorum, with access to four stations: Apsley, Berkhamsted, Hemel Hempstead and Tring. There is also a station in Kings Langley that, although it falls outside of the administrative area of Dacorum, serves existing communities in the area.</p> <p>There is a good level of bus services in Hemel Hempstead where the network is generally well developed and an adequate level of service in other locations. Markyate is an exception where bus transport is considered unreliable and poorly integrated with other larger local towns in the Borough. A key issue that has been identified is that bus services are not adequately linked between Hemel Hempstead rail station, Maylands and Hemel Hempstead town centre.</p> <p>A high frequency bus service (No.500) links the settlements of Tring, Berkhamsted, Hemel Hempstead and Kings Langley with other major settlements, including Watford and Aylesbury.</p> <p>The walking and cycling network generally meets current demand however there are localised issues, such as congestion on some routes putting people off using those routes. Routes to stations in particular are considered to be inadequate.</p> <p>According to the 2015 Hertfordshire County Travel Survey, 29% of work trips in Dacorum are less than 5 miles. The County Travel Survey data for 2018 identifies that 37.3% of work trips across the County are 5 miles or less.</p> <p>The 2018 County Travel Survey also reports that cycling makes up less than 1% of modal share in Dacorum (when considering total distance travelled where cycling was the main mode).</p> <p>In terms of walking to work, in Dacorum this decreased from 9.6% in 2001 to 8.9% in 2011. This decline is in line with the county and national trends. The County Travel Survey data for 2018 shows that across the County 13.6% of trips to work were made by foot.</p> <p>Generic effects for all options: The effects against this objective will be very dependent on the location of the new developments required to meet the proposed levels of housing growth, in terms of their relationship with existing services and local infrastructure.</p>

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	<p>Growth may help to result in improvements to public transport, including additional bus services and bus frequencies as well as improved railway station facilities and the frequency of services, which could encourage an increased take-up of public transport use over the use of the private car.</p> <p>Effects against this objective will be very dependent on the actual locations of new developments in relation to existing facilities and local infrastructure.</p>																	
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	<table border="1" data-bbox="595 523 1883 608"> <thead> <tr> <th data-bbox="595 523 808 563">Option A</th> <th data-bbox="808 523 1021 563">Option B</th> <th data-bbox="1021 523 1234 563">Option Ci</th> <th data-bbox="1234 523 1447 563">Option Cii</th> <th data-bbox="1447 523 1659 563">Option Di</th> <th data-bbox="1659 523 1883 563">Option Dii</th> </tr> </thead> <tbody> <tr> <td data-bbox="595 563 808 608">✓✓</td> <td data-bbox="808 563 1021 608">✓✓</td> <td data-bbox="1021 563 1234 608">✓✓</td> <td data-bbox="1234 563 1447 608">✓</td> <td data-bbox="1447 563 1659 608">✓/?</td> <td data-bbox="1659 563 1883 608">✓/?</td> </tr> </tbody> </table>						Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	✓✓	✓✓	✓✓	✓	✓/?	✓/?
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✓✓	✓✓	✓✓	✓	✓/?	✓/?													
	<p>Options A-D require the delivery of the c. 10,400 homes on existing and planned sites that are consistent with existing planning policies (the existing allocations and other Urban Capacity sites). As a general rule these sites will be closer to facilities in the town and village centres and so should reduce the need to travel, particularly by private car, through closer integration of housing, jobs and services.</p> <p>Hemel Hempstead is the most sustainable location in the Borough in terms of access to facilities, services and employment and therefore the options which require the higher levels of growth at Hemel Hempstead would be predicted to perform best against this objective when compared to options which require lower levels of growth at Hemel Hempstead. The percentage of overall development that would be provided at Hemel Hempstead under each option is as follows: Option A: 74%; Option B: 80%; Options Ci and Cii: 63%; and Option D: 63%.</p> <p>Significant positive effects have been identified for Options A and B as they both require 96% of new development in the Borough’s three most sustainable locations (Hemel Hempstead, Berkhamsted and Tring) and for Option Ci, which whilst seeking to distribute development more evenly across the Borough still requires 93% of new development at the three main settlements.</p> <p>Option Cii, which also seeks to distribute development more evenly across the Borough, places less emphasis on developments at the three main settlements than Options A, B and Ci (89% of new development at the three main settlements). This would be likely to result in an overall increase in the need to travel to access services and facilities.</p> <p>The new settlements under Options Di and Dii would both be some distance from major services and facilities and given the poor public transport links in the locality of the two new settlements (particularly for the area to the north-west of Tring under Option Di) would result in reliance on private cars, although this reliance may reduce over time as the settlements become established, along with the new or enhanced public transport provision, which results in some uncertainty as to the effects against this objective. Nevertheless, the option would still require 89% of new development to be at the Borough’s three main settlements.</p> <p>Compared to Options A and B, which require the same percentage of development at Berkhamsted and Tring (both 8% of the total growth), Options Ci, Cii, Di and Dii would require a higher percentage of the total growth at Tring than at Berkhamsted (16% v 14% for Option Ci and 14% v. 12% for Option Cii and Option D). These options would therefore make increased ‘use’ of the potential sustainability benefits associated with new development at Tring in relation to the provision of housing that is in relatively close proximity and which has level access to a railway station, an option that is not provided in Berkhamsted. However it should be recognised that Tring does not currently have the same level of facilities and services which are available in Berkhamsted, which would partly counter this positive effect.</p>																	

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		<table border="1"> <tr> <td>Option E (1,100 dpa)</td> </tr> <tr> <td>✓/?</td> </tr> </table> <p>This option is likely to require higher levels of development in all six of the Borough's main settlements or through the provision of a new settlement. The effects against this objective will be very dependent on the location of the new developments required to meet the proposed levels of housing growth, in terms of their relationship with existing services and local infrastructure. Growth may help to result in improvements to railway station facilities and the frequency of public transport services in the area, which could encourage an increased take-up of rail and bus use over the use of the private car.</p> <p>The effects against this objective would depend on how this additional growth is delivered, for example if it were through higher levels of growth at Hemel Hempstead the sustainability benefits would be higher than if it were through a new settlement or through spreading development evenly across the Borough's six main settlements. There is therefore some uncertainty as to the effects against this objective,</p> <p>Mitigation: Amongst others the proposed Local Plan policies covering Sustainable Transport, Transport and Movement, Walking and Cycling; Public Transport and Delivering High Quality Design will help towards reducing the need to travel, through closer integration of housing, jobs and services as well as enabling and encouraging walking, cycling and the use of public transport.</p>	Option E (1,100 dpa)	✓/?										
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✓/?														
12	Community cohesion	<p>Context: There is a shortage of primary and secondary school places in some parts of the Borough.</p> <p>Despite the relatively low levels of deprivation in the Borough as a whole, there are however small pockets of more deprived areas within Dacorum. The Index of Multiple Deprivation divides the Borough into 94 smaller areas called lower super output areas (LSOAs). Nine LSOAs in the Borough rank within the most deprived half of local areas nationally.</p> <p>Generic effects for all options: An increasing population will lead to additional pressure on local infrastructure. However, through direct provision and through developer contributions, it also provides the opportunity to provide new infrastructure that could be of benefit to all sections of Dacorum's community. Larger new developments have a greater potential to provide major on-site new community infrastructure when compared to a series of smaller developments, which although they would contribute to new infrastructure through CIL and s.106 would not be able to provide the land required for the new infrastructure.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td>✓/?</td> <td>✓/?</td> <td>✓/?</td> <td>✓/?</td> <td>✓/?</td> <td>✓/?</td> </tr> </tbody> </table> <p>This level of growth is likely to put significant pressure on local infrastructure, particularly schools, many of which are already under pressure.</p> <p>However, the increased levels of developer contributions and the opportunities provided at the larger developments under all the options should result in an increased provision of health, education, recreation and community facilities, as well as supporting the viability of existing services and facilities. It also provides the opportunity to provide new infrastructure that could be of benefit to all sections of</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	✓/?	✓/?	✓/?	✓/?	✓/?	✓/?
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	<p>Dacorum's community. Any effects would be dependent on the context of the individual settlement where development is proposed, in terms of the current and future capacity of services.</p> <p>The increased pressure on services and infrastructure at individual settlements will vary between the different options. For example, Options Ci and Cii (spread evenly across the six main settlements) would reduce the pressure in Hemel Hempstead, when compared to Option A (three town focus) and Option B (greater focus at Hemel), but would increase it in Berkhamsted and Tring and the large villages, particularly under Option Cii where some of the Option Ci development at Berkhamsted and Tring is reallocated to Bovingdon, Kings Langley and Markyate. Whilst lower levels of growth at any particular settlement would reduce any increase in the pressure on existing services and infrastructure it would mean that there would be less opportunities for new services and infrastructure to be provided by new developments. The balance of such competing effects will be dependent on the particularities of individual settlements, or parts of settlements, and the type and level of new infrastructure which could be provided by new developments.</p> <p>Options Di and Dii rely on the development of a new settlement which would be required to provide a range of services and community facilities. These would help to meet the needs of both new residents and existing residents in the areas of the Borough where the new settlement would be located.</p> <p>The different distributions of growth under each option will influence how the option performs against this objective in terms of the provision of new community facilities, For example the allocation of new Green Belt developments at Bovingdon, Kings Langley and Markyate under Options Ci would allow for the provision of new community facilities in these villages which could be used by existing and new residents. In addition, in the case of Bovingdon and Kings Langley under Option Cii the higher level of allocation could deliver new infrastructure such as new education facilities. Similarly, larger developments at the Borough's towns, the levels of which varies between options, could deliver some major additions/improvements to community facilities, including new schools.</p> <table border="1" data-bbox="595 948 808 1034"> <tr> <td data-bbox="595 948 808 986">Option E (1,100 dpa)</td> </tr> <tr> <td data-bbox="595 986 808 1034">✓/?</td> </tr> </table> <p>This level of growth would put additional pressure on local infrastructure when compared to Options A-D.</p> <p>However, the increased levels of developer contributions and the opportunities provided by additional development, particularly at the larger developments, should result in an increased provision of health, education, recreation and community facilities, as well as supporting the viability of existing services and facilities. It also provides the opportunity to provide new infrastructure that could be of benefit to all sections of Dacorum's community. Any effects would be dependent on the context of the individual settlement where development is proposed, in terms of the current and future capacity of services.</p> <p>The high levels of housing provision under this option, including affordable housing, would be likely to have associated benefits in terms of potential reductions in levels of deprivation and addressing inequality.</p> <p>Uncertainties: See SA4 Climate Change for details of the uncertainty relating to the potential new roads to be provided as part of larger developments.</p>	Option E (1,100 dpa)	✓/?
Option E (1,100 dpa)			
✓/?			

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)													
	Mitigation: The proposed Local Plan policies under the ‘Economic Development’, ‘Healthy Communities’ and ‘Implementation and Delivery’ sections should ensure that new development is located in close proximity to services and facilities and/or incorporate new facilities as well as where appropriate providing contributions towards wider local infrastructure. This should help to improve community cohesion and provide Borough-wide benefits from the new developments.													
13	<p>Housing</p> <p>Context: The revised method for calculating housing need identifies an annual housing requirement of 16,596 homes for the Borough over the Local Plan period 2020–2038, which equates to 922 dwellings per annum (dpa). The method for calculating housing need takes account of both the growth of the existing population and an adjustment to take account of affordability.</p> <p>There are currently over 5,500 people on the Council’s waiting list, with 6.3% of households considered to be overcrowded.</p> <p>At the time of the 2011 census 16.6% of the Borough’s population was aged 65 and over.</p> <p>Generic effects for all options: The greater the level of housing provided the greater will be the ability to meet the needs for the number, range and type of housing to meet the needs of all residents and communities in the Borough, in particular the need for affordable housing.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 730 1883 820"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td>✓/✓✓</td> <td>✓/✓✓</td> <td>✓/✓✓</td> <td>✓/✓✓</td> <td>✓/✓✓</td> <td>✓/✓✓</td> </tr> </tbody> </table> <p>Options A-D would all meet the local housing need figure for the Borough of 922 dpa.</p> <p>Option C would result in a higher level of new homes in smaller settlements than the other options (except Option G) which would help to meet local needs in these settlements.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="595 979 808 1059"> <tbody> <tr> <td>✓✓</td> </tr> </tbody> </table> <p>The provision of 1,100 dpa would exceed the local housing need figure for the Borough of 922 dpa by approximately 20% and would provide additional affordable housing as well as meet the needs for the number, range and type of housing of all residents and communities in the Borough. Therefore a significant positive effect has been identified in relation to this SA objective.</p> <p>Mitigation: The proposed Local Plan policies under the ‘Housing Delivery’ section should ensure that the number, type and range of housing is provided, so far as is viable, in order to meet the identified needs of the Borough.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓	✓✓
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii									
✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓	✓/✓✓									
✓✓														
14	<p>Sustainable prosperity</p> <p>Context: The main employment sectors in Dacorum are retail; information and communication; professional, scientific and technical; business, administration and support services; and education. Through the Local Plan process there is the possibility that land will be removed from the Green Belt for employment uses in areas to the south of Hemel Hempstead (north of the A41, west of Two Waters) and at Dunsley Farm in Tring in order to meet the future need for additional employment land. In addition, there is the potential for the provision of new employment land to the east of Maylands Business Park, including land at East Hemel Hempstead in St Albans District.</p>													

SA Objective		Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovingdon airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)													
		<p>Dacorum has working population of 70,421, with 94.6% of working age residents being economically active.</p> <p>Dacorum has approximately 9,160 enterprises. Maintaining a strong employment base is essential for the future prosperity of the area.</p> <p>The SW Hertfordshire Economic Studies (2016 and 2019) identified South West Hertfordshire as a Functional Economic Market Area (FEMA). This reflects evidence of strong commuting and migration relationships and shared leisure, retail and public sector catchment areas. The 2019 Study update The study recommended that the South West Hertfordshire authorities should aim to provide additional employment space between 2018 and 2036, as follows: Offices: 188,000 sqm (with 45,100 sqm in Dacorum); and Industrial: 481,500 sqm (with 195,500 sqm in Dacorum). The 2019 Study update identified a lack of supply of land suitable for small scale industrial uses in Dacorum.</p> <p>Generic effects for all options: Any increase in housing numbers will help to support the vitality and viability of the local economy through increased spending that supports local facilities, services and enterprises as well as the enhancement of the local economic offering. The greater the number of houses the greater that this effect will be. There would also be economic benefits resulting from the construction of the housing.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 759 1883 839"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>The level of new housing for Option A-D will help to support the vitality and viability of the local economy through increased spending across the Borough. There would also be economic benefits resulting from the construction of the housing.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="595 963 808 1043"> <tbody> <tr> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>This level of new housing will further help to support the vitality and viability of the local economy through increased spending across the Borough. There would also be economic benefits resulting from the construction of the housing.</p> <p>Mitigation: The proposed Local Plan policies the Employment Strategy and the Retail and Leisure Strategy and those under the 'Employment Development' section should ensure that existing employment sites will be retained where possible and Dacorum's unmet need for office and industrial space will be accommodated on the 55 hectare East Hemel Hempstead site in St Albans District.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	✓	✓	✓	✓	✓	✓	✓
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii										
✓	✓	✓	✓	✓	✓										
✓															
15	Employment and skills	<p>Context: The Hertfordshire County Travel Survey 2018 reported that 42% of Dacorum residents work within the Borough, with 23% working in other districts within Hertfordshire, 18% working in London and 14% working in an adjacent county.</p> <p>Whilst the Borough has a relatively low level of out-commuting when compared to some other SW Herts local authorities it will be necessary to ensure local residents have employment opportunities and access to training by encouraging local provision of and access to</p>													

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovington airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)													
	<p>jobs, enabling the provision of new and enhanced educational facilities and providing training that will help people acquire the skills needed to find and remain in employment.</p> <p>The SW Hertfordshire Economic Study (2016) estimated that jobs (measured as full time equivalent roles) in Dacorum will increase by 10,900 jobs between 2013 & 2036 (updated in the 2019 Study to 10,600 jobs). Around 58% of the additional jobs needed in Dacorum over this 23 year period are predicted to be in the office, industrial and distribution roles, which amounts to 5,400 full time equivalent jobs.</p> <p>Through the Local Plan process there is the possibility that land will be removed from the Green Belt for employment uses in areas to the south of Hemel Hempstead (north of the A41, west of Two Waters) and at Dunsley Farm in Tring in order to meet the future need for additional employment land. In addition, there is the potential for the provision of new employment land to the east of Maylands Business Park, including land at East Hemel Hempstead in St Albans District.</p> <p>Generic effects for all options: The provision of new homes could result in increased levels of out-commuting, but this will be dependent on the number, type and location of new jobs that are created alongside housing through the delivery of the Local Plan strategy. The increased economic activity associated with housing growth will help in the creation of new employment opportunities as well as in the retention of existing jobs.</p> <p>Options A-D – Growth at 922 dpa</p> <table border="1" data-bbox="595 778 1883 858"> <thead> <tr> <th>Option A</th> <th>Option B</th> <th>Option Ci</th> <th>Option Cii</th> <th>Option Di</th> <th>Option Dii</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>This level of housing growth, which meets the objectively assessed need (OAN), should maximise the ability for people to live close to where they work. This option also includes scales and distribution of development which would be required to deliver educational infrastructure where there are current or predicted future deficits, alongside enhanced third level education provision at Hemel Hempstead.</p> <p>The options with the higher levels of growth at Berkhamsted and Tring (i.e. Options Ci, Cii and D) provide the greatest potential to deliver new secondary schools which would address the identified deficits for these towns. Similarly, Option Cii would provide the level of new development in Bovington that could provide a new primary school and so address the current deficit in such provision in that part of the Borough.</p> <p>Option E (1,100 dpa)</p> <table border="1" data-bbox="595 1145 808 1225"> <tbody> <tr> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>This level of housing growth, which is above the objectively assessed need (OAN), should enable people to remain living in the area and therefore have improved access to newly created employment opportunities.</p>	Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii	✓	✓	✓	✓	✓	✓	✓
Option A	Option B	Option Ci	Option Cii	Option Di	Option Dii									
✓	✓	✓	✓	✓	✓									
✓														

SA Objective	Option A - Growth focused on the three towns (922 dpa); Option B - Greater focus at Hemel Hempstead (922 dpa); Option Ci - Spread evenly across the six main settlements (low growth in villages) (922 dpa); Option Cii - Spread evenly across the six main settlements (high growth in Bov. & KL) (922 dpa); Option D - New Settlement (Di in north-west of Borough; Dii at Bovington airfield) and growth in towns (922 dpa); and Option E - Higher Growth Option (1,100 dpa)
	This option also includes scales and distribution of development which would be required to deliver educational infrastructure where there are current or predicted future deficits, alongside enhanced third level education provision at Hemel Hempstead. This would help to meet the sub-objective “To enable the provision of new and enhanced educational facilities”.
	Mitigation: The proposed Local Plan policies under the ‘Employment Development’ and ‘Healthy Communities’ sections should help to provide the number and range of job types and education opportunities in order to meet the identified needs of the Borough.

Appendix D Assessments of the Draft Local Plan Strategies and Policies

The strategies, policies and sites included in the Draft Local Plan have been assessed against the objectives in the SA Framework (see Appendix A).

In the assessments the strategy/policy/site have been ‘scored’ using the significance criteria shown below. The assessment scoring is supported by an assessment commentary to provide the rationale behind the score allocated.

Significance Assessment	Description
✓✓	The option is likely to have a significant positive effect
✓	The option is likely to have a positive effect which is not significant
?	Uncertain – It is uncertain how or if the option impacts on the SA/SEA objective
–	Neutral – The option is unlikely to impact on the SA/SEA objective
✗	The option is likely to have a negative effect which is not significant
✗✗	The option is likely to have a significant negative effect

The following tables outline the symbols and abbreviations used to document the results of the assessment process.

Scale		
Symbol	Meaning	Comment
L	Local	Within Dacorum Borough
R	Regional	Affecting neighbouring local authorities
N	National	UK or a wider global impact
Permanence		
Symbol	Meaning	Comment
P	Permanent	E.g. Effects lasting during and beyond the life of the plan
T	Temporary	E.g. Effects during construction
Timescale		
In the Short Term		0-10 years
In the Medium Term		10-20 years
In the Long Term		After life of plan

SP1: Sustainable Development in Dacorum

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include conserving and protecting the natural environment.	P	L	✓	✓	✓
2	Water	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include minimising the effects of pollution on people and the environment.	P	L	✓	✓	✓
3	Flood risk	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include protecting people and property from flooding.	P	L	✓	✓	✓
4	Climate Change	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include mitigating and adapting to climate change.	P	N	✓	✓	✓
5	Air Quality	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include reducing the impacts of new development on air quality.	P	L	✓	✓	✓
6	Soils	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include conserving and protecting the natural environment.	P	L	✓	✓	✓
7	Resource efficiency	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include promoting the use of renewable resources, reduce carbon emissions, protect natural resources and minimise waste.	P	L	✓	✓	✓
8	Historic Environment	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include the protection and enhancement of Dacorum's distinctive historic environment.	P	L	✓	✓	✓
9	Landscape/ Townscape	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include conserving and protecting the natural environment.	P	L	✓	✓	✓
10	Health and Wellbeing	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include supporting community health, wellbeing and cohesion.	P	L	✓	✓	✓
11	Sustainable Locations	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include enabling convenient access between jobs, homes and facilities, minimise the impact of traffic and reduce the overall need to travel by car.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
12	Community cohesion	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include supporting community health, wellbeing and cohesion.	P	L	✓	✓	✓
13	Housing	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include delivering Dacorum's future with homes for everyone.	P	L	✓	✓	✓
14	Sustainable prosperity	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include generating a vibrant economy with opportunities for all.	P	L	✓	✓	✓
15	Employment and skills	The policy requires that development proposals contribute towards meeting the Plan's strategic objectives – which include generating a vibrant economy with opportunities for all.	P	L	✓	✓	✓

Policy SP2 – Spatial Strategy for Growth

This assessment considers the general Borough-wide effects associated with the Spatial Strategy and not settlement-level or site-level effects. Those effects are considered in the assessments undertaken for the 'Delivery Strategies' and 'Proposal and Sites' sections of the Draft Local Plan, respectively. In addition the more detailed effects associated with the housing and employment provisions are picked up in the assessments for 'SP4 - The Housing Strategy' and 'SP5 - Delivering the Employment Strategy' respectively.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Concentrating the majority of development in the Borough's most sustainable settlements and the intensification of sites within Hemel Hempstead through increased heights and densities would help to reduce the amount of greenfield land required to deliver the levels of growth in the Local Plan, thereby reducing levels of adverse effects on biodiversity.	P	L	✓	✓	✓
		<p>Making provision for 16,596 new homes and 116,500 sqm of industrial floorspace over the Local Plan period has the potential to result in adverse effects on biodiversity. These effects will be dependent on the location and biodiversity characteristics of the sites to be developed.</p> <p>In addition there could be some adverse secondary effects on biodiversity as a result of increased pressure on water resources that would result from additional dwellings in the Borough, when considered alongside new developments in neighbouring local authorities.</p> <p>The proximity of settlements in Dacorum to the Chiltern Beechwoods SAC at the Ashridge Estate could mean that the SAC is subject to increased levels of recreational pressure. This issue will be investigated and assessed through a separate Habitats Regulations Assessment.</p>	P	L	x	x	x
2	Water	<p>The Catchment Abstraction Management Strategy (CAMS) for the Colne catchment identified that the underlying chalk aquifer is assessed as being 'over-abstracted'. Therefore, providing for a minimum of 16,596 new dwellings in the Local Plan period would increase this pressure on water resources. The effect is likely to become more significant over time as more dwellings are built and risk of periodic water shortages increases.</p> <p>New development could also result in the pollution of water course both during construction and when developments are occupied, as well as affecting groundwater resources, particularly if the development is in a Source Protection Zone (SPZ). New development increases the potential for water pollution, associated with</p>	P	R	x	x	x

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		increased run-off from impermeable surfaces and the potential for sewer flooding in high rainfall events. The likelihood and level of such effects will be dependent on the specific development locations.					
3	Flood risk	No predicted effects. The level of growth proposed in the Local Plan should be able to be provided without the need to develop in areas of higher flood risk.	-	-	-	-	-
4	Climate Change	Concentrating the majority of development in the Borough's most sustainable locations would help to reduce the need to travel and the average distances travelled to access facilities which could have a positive effect on reducing the growth of greenhouse gas (GHG) emissions from transport.	P	N	✓	✓	✓
		Making provision for 16,596 new homes and 116,500 sqm of industrial floorspace over the Local Plan period would inevitably result in an increase in greenhouse gas emissions from energy used in the construction and occupation of new housing / employment uses and the associated activities including increases in traffic.	P	N	✗	✗	✗
5	Air Quality	Transport is a key source of air pollution. Concentrating the majority of development in the Borough's most sustainable locations would help to reduce the need to travel to access facilities and the average distances travelled which would have a positive effect on reducing the growth of airborne emissions from transport.	P	L	✓	✓	✓
		Making provision for 16,596 new homes and 116,500 sqm of industrial floorspace over the Local Plan period would contribute to background emissions through an increase in the number of vehicles on the road.	P	L	✗	✗	✗
6	Soils	Concentrating the majority of development in the Borough's most sustainable settlements and the intensification of sites within Hemel Hempstead through increased heights and densities would help to reduce the amount of greenfield land required to deliver the levels of growth in the Local Plan. This should minimise levels of soil sealing and the degradation/loss of soils.	P	L	✓	✓	✓
		Making provision for 16,596 new homes and 116,500 sqm of industrial floorspace over the Local Plan period would inevitably require development on greenfield sites – with associated adverse effects on soils.	P	L	✗	✗	✗
7	Resource efficiency	The level of new housing and employment development proposed would result in adverse effects against this objective due the high level of resource use and waste generation associated with the new developments.	P	L	✗	✗	✗
8	Historic Environment	The housing and employment development proposed for the Local Plan could have adverse effects on known or undiscovered heritage assets. Effects will however be dependent on the specific sites taken forward for development.	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
9	Landscape/ Townscape	Making provision for 16,596 new homes and 116,500 sqm of industrial floorspace over the Local Plan period would inevitably result in effects on the local landscapes and townscapes in those areas where new development takes place. This could have the potential to result in adverse effects on the local and wider landscapes, such as the setting of the Chilterns AONB.	P	L	x	x	x
		Concentrating the majority of development in the Borough's most sustainable settlements and the intensification of sites within Hemel Hempstead through increased heights and densities would help to reduce the amount of greenfield land required to deliver the levels of growth in the Local Plan, thereby reducing levels of adverse effects on local landscapes.	P	L	✓	✓	✓
10	Health and Wellbeing	Concentrating the majority of development in the Borough's most sustainable settlements should help to provide opportunities for physical activity by providing walkable and cyclable neighbourhoods. This would help to encourage healthier lifestyles. The provision of this level of housing growth would help to meet the housing needs of the local population and reduce issues of overcrowding and stress related to any inadequacy of housing provision.	P	L	✓	✓	✓
11	Sustainable Locations	Concentrating the majority of development in the Borough's most sustainable settlements should reduce the need to travel, as a larger proportion of residents would be closer to key services and facilities. Significant positive effects have therefore been identified against this objective.	P	L	✓✓	✓✓	✓✓
12	Community cohesion	Concentrating the majority of development in the Borough's most sustainable settlements, which are most accessible by all forms of transport, should improve access to facilities and services, particularly for those without access to a private car.	P	L	✓	✓	✓
		Delivering the level of growth proposed in the Strategy could result in a cumulative impact on community infrastructure across the Borough. Effects will vary between area and will also depend on the levels of new infrastructure provided as part of new developments.	-	-	?	?	?
13	Housing	Making provision for 16,596 new homes over the Local Plan period would meet the Borough's Objectively Assessed Need (OAN) for housing and therefore significant positive effects have been identified against this objective. Whilst the majority of new housing development would be concentrated at the main settlements, the policy allows for some small scale infilling in the smaller settlements within the Green Belt, thereby allowing for some provision of housing in rural areas.	P	L	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
14	Sustainable prosperity	Making provision for 116,500 sqm of industrial floorspace over the Local Plan period would support the delivery of the needs identified in the South West Hertfordshire Economic Studies (2016 and 2019) and therefore significant positive effects have been identified against this objective.	P	L	✓✓	✓✓	✓✓
15	Employment and skills	Making provision for 116,500 sqm of industrial floorspace over the Local Plan period would support the delivery of the needs identified in the South West Hertfordshire Economic Studies (2016 and 2019) and therefore significant positive effects have been identified against this objective.	P	L	✓✓	✓✓	✓✓
Mitigation within the plan:		<p>The 'Environment and Biodiversity' policies provide the policy framework to help to mitigate the potential adverse effects associated with the potentially high levels of housing and employment development, as well as seeking opportunities for enhancements</p> <p>Policy DM35 'Protection from Environmental Pollution' should minimise negative impacts on soil by preventing development which would result in harmful soil pollution though this would not prevent soil sealing. However, concentrating the majority of development in the Borough's most sustainable settlements and the intensification of sites within Hemel Hempstead through increased heights and densities would help to reduce the amount of greenfield land required to deliver the levels of growth in the Local Plan. This should minimise levels of soil sealing and the degradation/loss of soils.</p> <p>A Habitats Regulations Assessment is being undertaken to examine whether the Local Plan would have adverse effects on any European sites, most notably the Chilterns Beechwoods SAC. If likely significant effects are identified there will be a need to develop mitigation measures to reduce or avoid such effects. This could include the provision of SANGs. These mitigation measures would be included in Local Plan policies. Whilst this mitigation will be focused on effects on the SAC it could also help to mitigate wider effects, such as those on SSSIs within the Borough and other designated and non-designated sites which are important for biodiversity.</p> <p>In relation to potential adverse effects identified against the Landscape objective (SA9), particularly those relating to the setting of the Chilterns AONB, the requirements of Policy DM27 'Landscape Character and Chilterns Area of Outstanding Natural Beauty' provide a robust framework for mitigation and should prevent any development from disrupting the quality, character and condition of the landscape in Dacorum.</p> <p>The policies covering 'Protection and Enhancement of the River Character and Water Environment' would provide the policy framework to help to mitigate the potential adverse effects on water quality and the availability of water resources that may arise from new development, whilst Policy DM35 Protection from Environmental Pollution should help to address air quality issues.</p> <p>The policies covering 'Delivering Great Places' would help towards minimising the effects on the landscape, townscape and historic environment, including on designated and non-designated heritage assets and their settings, as well as seeking to provide enhancements.</p> <p>The policies under 'Transport and Connectivity' would help mitigate against increased transport emissions by helping to enable sustainable transport options such as access to public transport and active travel modes.</p>					

SA Objective	Assessment of Effect					
	Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
				In short term	In medium term	In long term
	<p>The policies covering 'Climate Change and Sustainability' will help to minimise growth in greenhouse gas emissions resulting from the growth proposed in the Spatial Strategy. The policies under 'Sustainable Design and Construction' and 'Carbon Offsetting' would help towards minimising the resources required to deliver new development and reducing the waste generated by the new development, as well as ensuring that there is sufficient infrastructure in place to cope with the increases associated with the potential levels of growth, mitigating the negative effects against Resource Efficiency.</p> <p>In relation to the uncertainty as to whether growth would impact on infrastructure, Policy SP7 'Delivering Infrastructure' should ensure that the necessary infrastructure requirements are provided in a timely manner.</p>					

Policy SP3 – The Settlement Hierarchy

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
1	Biodiversity	No predicted effects	-	-	-	-	-	
2	Water	No predicted effects	-	-	-	-	-	
3	Flood risk	No predicted effects	-	-	-	-	-	
4	Climate Change	Focusing development in the main settlements, as defined by the settlement hierarchy, would help to reduce the need to travel to access services and facilities, with associated benefits in terms of reducing growth in greenhouse gas emissions associated with transport.	P	L	✓	✓	✓	
5	Air Quality	No predicted effects	-	-	-	-	-	
6	Soils	No predicted effects	-	-	-	-	-	
7	Resource efficiency	No predicted effects	-	-	-	-	-	
8	Historic Environment	No predicted effects	-	-	-	-	-	
9	Landscape/ Townscape	No predicted effects	-	-	-	-	-	
10	Health and Wellbeing	No predicted effects	-	-	-	-	-	
11	Sustainable Locations	The proposed settlement hierarchy would ensure that new development takes place in the Borough's most sustainable locations – thereby having significant positive effects in relation to this objective.	P	L	✓✓	✓✓	✓✓	
12	Community cohesion	No predicted effects	-	-	-	-	-	
13	Housing	No predicted effects	-	-	-	-	-	
14	Sustainable prosperity	No predicted effects	-	-	-	-	-	
15	Employment and skills	No predicted effects	-	-	-	-	-	

Policy SP4 – The Housing Strategy

DM1 - Mix of Housing

DM2 - Affordable Housing

DM3 – Rural Exceptions

DM4 – Agriculture and Forestry Workers Dwellings

DM5 – Conversions and changes of use to housing

DM6 – Residential Annexes

DM7 – Houses in Multiple Occupation

DM8 - Custom and Self Build

DM9 - Housing for Older People

DM10 – Accessible and Adaptable Homes

DM11 - Density of Development

DM12 - Nationally Described Space Standards

DM13 – Existing Accommodation for Traveller Communities

DM14 - Gypsies and Travellers

DM15 - Residential Moorings

This assessment considers the general Borough-wide effects associated with the Housing Strategy (and its associated DM polices) and not settlement-level or site-level effects. Those effects are considered in the assessments undertaken for the ‘Delivery Strategies’ and ‘Proposal and Sites’ sections of the Draft Local Plan, respectively.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	<p>The significance of the effects on biodiversity of making provision for 16,596 new homes over the Local Plan period would be dependent on the biodiversity value of the development sites, irrespective of whether they are greenfield land or previously developed land (which can have a high biodiversity value). Mitigation measures would need to be put in place in order to minimise any impacts on biodiversity and geodiversity associated with new developments.</p> <p>Any development of greenfield land could have adverse impacts on habitats and species due to landtake, habitat fragmentation, urban pollution issues etc. Increased numbers of new dwellings will also increase pressure on local biodiversity (including designated sites) through increased recreation, dog walking, predation by domestic cats etc.</p> <p>In addition there could be some adverse secondary effects on biodiversity as a result of increased pressure on water resources that would result from additional dwellings in the Borough, when considered alongside new developments in neighbouring local authorities.</p>	P	L	x	x	x
		<p>New development does provide opportunities for habitat enhancement and improved habitat connectivity, particularly at larger sites where there would be the greatest opportunities for providing new green infrastructure. The national and local policy requirement for new development to provide a net gain in biodiversity further reinforces this point. The provision of open space, including SANGs if required, as part of large new developments would help to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at current 'honeypot' locations such as the Ashridge Estate.</p> <p>Ultimately, the type and level of the effects will be dependent on the biodiversity value of the sites which are taken forward for development, as well as the opportunities which they provide for enhancements, particularly given the requirement for development to deliver a net-gain in biodiversity.</p>	-	-	?	?	?
2	Water	<p>Making provision for 16,596 new homes over the Local Plan period would put pressure on water resources. The effect is likely to become more significant over time as more dwellings are built and risk of periodic water shortages increase.</p> <p>New housing development could also result in the pollution of water course both during construction and when developments are occupied, as well as affecting groundwater resources, particularly if the development is in a Source Protection Zone (SPZ). New development increases the potential for water pollution, associated with increased run-off from impermeable surfaces and the potential for sewer flooding in high rainfall events. The likelihood and level of such effects will be dependent on the specific development locations.</p>	P	R	x	x	x

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
3	Flood risk	This level of growth could be delivered without having to build new dwellings in areas at the highest risk from flooding.	-	-	-	-	-
4	Climate Change	<p>Making provision for 16,596 new homes over the Local Plan period would result in an increase in greenhouse gas (GHG) emissions from energy used in the construction and occupation of new housing and associated activities including increases in traffic. In relation to increased traffic, the levels of increased vehicle usage and miles travelled would be dependent of how close new developments are to existing services and facilities, as well as the type and level of new services and facilities provided by new developments, either on-site or through CIL and S106.</p> <p>Growth in and around the Borough would place increased strain on the existing transport infrastructure. Traffic congestion is a problem, particularly in Hemel Hempstead and in order to reduce carbon emissions, there is a need to encourage walking, cycling and public transport as alternatives to the car.</p>	P	N	x	x	x
		<p>Development can help to mitigate and adapt to the impacts of climate change, through sustainable design and construction and reducing the need to travel, particularly by car. Any large developments required to deliver this level of growth may provide opportunities for significant transport infrastructure and a step change in sustainable travel and could also potentially increase the viability of existing public transport services and/or provide contributions towards new services. Another key factor which would influence the levels of GHG would be the provision of walking and cycling infrastructure and public transport, which would enable the take-up of sustainable transport choices, always however dependent on individuals' behavioural choices to make walking and cycling the 'natural choice' for shorter journeys, or as part of a longer one. Such infrastructure and provision should be provided from the outset of the occupancy of a new development in order to encourage and embed sustainable travel from the start of the developments being occupied.</p> <p>SP04 encourages increasing the density of houses in sustainable locations that are already served by public transport. This would help to reduce the levels of growth of transport related CO₂ emissions from new development.</p>	P	L	✓	✓	✓
5	Air Quality	<p>Road transport emissions are the major contribution to the burden of air pollution encountered in the Borough. Building additional new homes would contribute to background emissions through an increase in vehicles on the road. During construction there are potential adverse effects on local air quality close to the development sites.</p> <p>Housing development would result in an increase in traffic levels, with associated implications for local air quality. The higher the level of housing the greater the potential effects will be. However, as for GHG, the levels</p>	P	L	x	x	x

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		<p>of increased vehicle usage and miles travelled would be dependent of how close new developments are to existing services and facilities, as well as the type and level of new services and facilities provided by new developments, either on-site or through CIL and S106.</p> <p>New housing development in and around Hemel Hempstead could result in the exacerbation of air quality issues at the two AQMAs at Lawn Lane and London Road.</p> <p>As with GHG emissions, air pollution relating to travelling to work would be dependent on the location of new housing development in relation to current employment opportunities and whether suitable new employment opportunities are provided in order to reduce the need to commute.</p> <p>As the vehicle fleet is replaced over time by vehicles having reduced or zero emissions (particularly of NOx and particulates) so the contribution of traffic towards air quality issues would diminish.</p>					
		<p>Any large developments required to deliver this level of growth may incorporate sustainable transport infrastructure and facilities and could potentially increase the viability of existing public transport services and/or provide contributions towards new services. Another key factor which would influence local air quality would be the provision of walking and cycling infrastructure and public transport, which would enable the take-up of less polluting transport choices, always however dependent on behavioural choices. Such infrastructure and provision should be provided from the beginning of a new development in order to encourage and embed sustainable travel from the outset of the developments being occupied. These would help to reduce the levels of growth of transport related airborne pollutant emissions from new development.</p> <p>In addition, continuing improvements in vehicle engine and exhaust technologies should act as a counteracting measure.</p>	-	-	?	?	?
6	Soils	<p>Housing development on greenfield sites would result in soil sealing from new housing and associated infrastructure and in many cases the loss of agricultural land. The higher the level of housing the greater the amount of soil sealing that would result and the greater likelihood that areas of best and most versatile agricultural land would be lost to new development.</p>	P	L	x	x	x
		<p>Development on brownfield sites may provide opportunities for remediating contaminated land.</p>	P	L	✓	✓	✓
7	Resource efficiency	<p>Housing growth of this level would put demands on natural resources and result in increased waste generation. However the larger developments which would be required to deliver this level of growth could provide district heating opportunities which would help to reduce overall energy use.</p>	P	L	x	x	x

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
8	Historic Environment	<p>New development has the potential to result in adverse effects on heritage assets and their settings and the wider historic environment. The significance of the effects on the historic environment of delivering the new development will be largely dependent on the nature of any heritage assets and their settings that are associated with the sites, as well as the scale and design of the new developments.</p> <p>New development may also result in significant loss or erosion of the landscape or townscape character or quality, which is likely to also have an impact (direct and or indirect) upon the historic environment and people's enjoyment of it.</p> <p>DM11 seeks to ensure that housing density should not adversely affect heritage assets in an area.</p>	-	-	?	?	?
9	Landscape/ Townscape	<p>Greenfield sites in the Green Belt would be required to deliver this level of housing with associated adverse effects on local landscapes and erosion of green links between some existing residential areas and the countryside as well as the potential for eroding gaps between settlements. This could include adverse effects on the setting of the Chilterns AONB which lies close to the three main towns of Berkhamsted, Hemel Hempstead and Tring as well as to the west of Markyate. Cumulative effects of development on the special qualities of the AONB, either individually or cumulatively, will need to be considered when determining which development sites, and groups of sites, will be proposed for inclusion in the Local Plan, including the consideration of how adverse effects can be avoided or reduced.</p> <p>New development could also result in a loss of tranquillity and increased light pollution in the surrounding area.</p> <p>The significance of the effects on the landscape/townscape of delivering this level of housing growth will be dependent on the special qualities of the landscape/townscape associated with each of the sites and how the new development is accommodated within the landscape.</p>	P	L	x	x	x
		<p>New development could provide opportunities to improve the local townscape and public realm, particularly if the site is currently a poor contributor to the character of the local area. This could particularly be the case for the 'urban capacity' sites.</p> <p>DM11 indicates that housing density should not have an adverse effect on the character of an area or its townscape. Depending on location, new housing developments could contribute towards townscape improvements.</p>	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
10	Health and Wellbeing	<p>The provision of this level of housing growth would help to meet the housing needs of the local population and reduce issues of overcrowding and stress related to any inadequacy of housing provision. Developer contributions may provide new open space and green infrastructure which would encourage outdoor recreation and active travel.</p> <p>New open space and green infrastructure provided through new developments would help to encourage healthy recreation activities and support improvements in health and wellbeing across the Borough. Large new developments would provide the greatest opportunities for the provision of new green infrastructure, as well as the enhancement of existing green infrastructure.</p>	P	L	✓	✓	✓
		<p>Effects on the health objective would be dependent on how the level of growth is delivered in terms of a variety of factors such as: the efficient delivery of health care in a manner that ensures existing services are not overstretched; the ease of access to existing health facilities and recreation opportunities, the design of developments to enable the take up of active travel modes; provision of a range of homes to meet the needs of all groups in society etc. The provision of new social and community facilities as part of new developments can provide health and wellbeing benefits for both new and existing residents.</p> <p>An increasing population would lead to additional pressure on secondary healthcare services in the Borough. The increasing proportion of older people in the Borough's population is also likely to have put pressure on secondary healthcare needs, as they are likely to utilise healthcare services more than others.</p>	-	-	?	?	?
11	Sustainable Locations	<p>SP4 supports the redevelopment of previously developed land, vacant or underused sites within the urban areas of the Borough – these being the most sustainable locations. In addition, the policy supports bringing regeneration opportunities in and around Hemel Hempstead Town Centre, Two Waters and Maylands Growth Areas, which are the most sustainable locations in the Borough. SP4 also supports the increased height and densities of new developments in the Borough's most sustainable locations, particularly Hemel Hempstead. This is backed up by DM11 which supports focusing development in the most sustainable areas by increasing housing density within the Borough's main settlements.</p>	P	L	✓✓	✓✓	✓✓
		<p>Opportunities to locate the scale of development which will be required to fully meet this level of housing growth within urban areas close to town centre facilities are limited. This means that the edge of town sites that are the next most sustainable locations would in most instances be at a distance from the town centre facilities</p>	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		and services. However, some sites would be of a scale such that new services and facilities could be provided in the development, reducing the need to travel. Growth may help to result in improvements to public transport, including additional bus services and bus frequencies as well as improved railway station facilities and the frequency of services, which could encourage an increased take-up of public transport use over the use of the private car.					
12	Community cohesion	An increasing population would lead to additional pressure on local infrastructure. However, through direct provision and through developer contributions, it also provides the opportunity to provide new infrastructure that could be of benefit to all sections of Dacorum's community. Housing growth could also provide benefits by supporting the viability of existing services and facilities. Larger new developments have a greater potential to provide major on-site new community infrastructure when compared to a series of smaller developments, which although they would contribute to new infrastructure through CIL and s.106 would not be able to provide the land required for the new infrastructure.	P	L	✓	✓	✓
13	Housing	Policy SP4 requires the provision of a minimum of 16,595 homes across the Plan period (922 homes p.a.) which would meet the Borough's Objectively Assessed Need (OAN) and supports the provision of a mix of housing tenures, types and sizes of homes, plots for self-build and custom housing, and specialist accommodation to meet the needs for care in the community and an ageing population. It also provides protection for authorised gypsy, traveller and travelling showpeople sites. DM2 ensures that a minimum 35% of urban housing and 40% of other housing is genuinely affordable. DM9, DM13 and DM14 ensure that the housing needs for all groups are met by safeguarding existing plots and accommodating growth of different housing types, whilst DM12 would require residential developments to comply with nationally described space standards. Significant positive effects have therefore been identified for this objective.	-	-	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
14	Sustainable prosperity	<p>The increase in housing numbers would help to support the vitality and viability of the local economy, including local centres and town centres, through increased spending that supports local facilities, services and enterprises as well as the enhancement of the local economic offering. There would also be economic benefits resulting from the construction of the housing.</p> <p>Development of new services and facilities to support new and existing residents would provide benefits for the local economy, both at the construction stage and into the future.</p>	P	L	✓	✓	✓
15	Employment and skills	<p>The increase in housing numbers would help to support the vitality and viability of the local economy, including local centres and town centres, through increased spending that supports local facilities, services and enterprises as well as the enhancement of the local economic offering. The increased economic activity associated with housing growth would help in the creation of new employment opportunities as well as in the retention of existing jobs.</p> <p>Development of new services and facilities to support new and existing residents would provide new employment opportunities, both at the construction stage and provision of jobs in new shops, schools and healthcare facilities etc. that would be required with this scale of growth.</p> <p>The provision of new homes could result in increased levels of out-commuting, but this would be dependent on the number, type and location of new jobs that are created alongside housing through the delivery of the Local Plan strategy.</p>	P	L	✓	✓	✓
Mitigation within the plan:		See the mitigation identified for Policy SP2.					

Policy SP5 – Delivering the Employment Strategy

DM16 - General Employment Areas

DM17 - Other office and industrial sites

DM18 – Tourism

This assessment considers the general Borough-wide effects associated with the Employment Strategy (and its associated DM polices) and not site-level effects. Those effects are considered in the assessments undertaken for the ‘Delivery Strategies’ and ‘Proposal and Sites’ sections of the Draft Local Plan, respectively.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Developing new employment sites could have an adverse effect on biodiversity however this will be dependent on the biodiversity value of the site chosen. SP5 identifies two employment growth areas located in the countryside and three employment growth areas located in urban areas. The significance of the effects will be dependent on the characteristics of the specific development sites taken forward. Through the promotion of tourism to the area DM18 may cause additional recreational pressure on those popular destination sites with high biodiversity value, such as Ashridge House and Estate, and Tring Park.	-	-	?	?	?
2	Water	No predicted effects	-	-	-	-	-
3	Flood risk	No predicted effects	-	-	-	-	-
4	Climate Change	Activities relating to the new employment sites, e.g. transport, would result in some increases in GHG emissions. SP5 outlines the Borough’s aims to attract more business to the area and expand on existing employment sites at Hemel Hempstead. DM16 identified multiple sites within Hemel Hempstead, Tring and Berkhamsted where offices, industrial units and warehouses may be located. The position of the Borough near to the M25 and M1 may encourage use of the car to access new employment sites.	P	N	x	x	x
		Retaining and developing existing employment land could reduce the need to travel and private car use if it is located close to residential areas and where sustainable transport infrastructure already exists. This could reduce growth in greenhouse gas emissions. In addition, expanding employment opportunities in the Borough could help to avoid increases in the levels of out-commuting thereby reducing growth in GHG emissions. In addition, DM16 supports the development of general employment areas that include facilities to support the local community such as nurseries and crèches which will help to reduce some travel needs.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
5	Air Quality	Transport relating to the new employment sites, would result in some increases in airborne emissions.	P	L	x	x	x
		Retaining and developing existing employment land could reduce the need to travel and private car use if it is located close to residential areas and where sustainable transport infrastructure already exists. This could reduce growth in airborne emissions. In addition, expanding employment opportunities in the Borough could reduce levels of traffic thereby reducing growth in airborne emissions. DM16 supports the development of general employment areas that include facilities to support the local community such as nurseries and crèches which will help to reduce some travel needs.	P	L	✓	✓	✓
6	Soils	The development of any new employment sites would be likely to result in soil loss. DM17 notes that proposals for office and industrial development in the countryside will be considered.	P	L	x	x	x
7	Resource efficiency	Retaining and developing existing employment land areas should progress this objective due to its location and the ability to use existing infrastructure.	P	L	✓	✓	✓
8	Historic Environment	New employment development could have adverse effects on known or undiscovered historic and cultural heritage. Redevelopment of employment sites may help to improve certain historic areas of the town centres. DM18 recognises that historic and cultural assets must be preserved, however promoting tourism in the Borough may make this more challenging.	-	-	?	?	?
9	Landscape/ Townscape	DM17 notes that proposals for office and industrial development in the countryside will be considered. Effects will be dependent on the location and scale of the site chosen. Redevelopment of employment sites may help to improve local townscapes.	-	-	?	?	?
10	Health and Wellbeing	Increasing employment opportunities within the Borough could result in improved health and well-being of local residents. The general employment areas outlined in DM16 are mostly urban sites within the Borough's existing settlements which could encourage active travel if located close to residential areas.	P	L	✓	✓	✓
11	Sustainable Locations	Retaining and developing existing employment land may reduce the need to travel and private car use if it is located in close proximity to existing residential areas and where existing sustainable transport infrastructure exists. The provision of significant new employment development in the sites listed in DM16 supports this objective.	P	L	✓	✓	✓
12	Community cohesion	DM16 supports the development of general employment areas that include facilities to support the local community such as nurseries and crèches.	-	-	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
13	Housing	No predicted effects	-	-	-	-	-
14	Sustainable prosperity	Retaining existing employment sites and allocating additional employment areas in the Borough would progress this objective by supporting the local economy. The provision of significant new employment development within the sites listed in DM16 supports this objective. Significant positive effects have been predicted.	P	L	✓✓	✓✓	✓✓
15	Employment and skills	Retaining existing employment sites and allocating additional employment areas in the Borough should provide more local employment opportunities. The provision of significant new employment development within the sites listed in DM16 supports this objective. Significant positive effects have been predicted.	P	L	✓✓	✓✓	✓✓
Mitigation within the plan:		See mitigation identified for Policy SP2.					

Policy SP6 – Delivering the Retail and Leisure Strategy

DM19 - Mix of uses in Town Centres, District and local centres

DM20 - Neighbourhood centres and scattered local shops

DM21 – Main Town Centre uses outside existing centres

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Developing new retail and leisure sites could have an adverse effect on biodiversity however this will be dependent on the biodiversity value of the site chosen. Growth is to be focused in town centre areas where biodiversity value is likely to be lower, though the significance of the effects will be dependent on the characteristics of the specific development sites taken forward.	-	-	?	?	?
2	Water	No predicted effects.	-	-	-	-	-
3	Flood risk	No predicted effects.	-	-	-	-	-
4	Climate Change	Activities relating to the new retail development, e.g. transport and construction, would result in some increases in GHG emissions.	P	L	x	x	x
		The development of new local and neighbourhood centres as proposed in SP6 would reduce the need to travel for new and existing residents to access facilities and services. DM21 notes that no new out of centre retail parks are proposed within SP06, with growth focused on town centres and edge of centre proposals should be in accessible locations. By focusing development in the most accessible locations, growth in GHG emissions could be reduced. DM20 supports the provision of local convenience shops to serve local communities, reducing the need to travel to access amenities.	P	L	✓	✓	✓
5	Air Quality	The development of new local and neighbourhood centres as proposed in SP6 would reduce the need to travel for new and existing residents to access facilities and services. DM21 notes that no new out of centre retail parks are proposed within SP6, with growth focused on town centres and edge of centre proposals should be in accessible locations. By focusing development in the most accessible locations, growth in airborne emissions could be reduced. DM20 supports the provision of local convenience shops to serve local communities, reducing the need to travel to access amenities.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
6	Soils	Though growth is focused in town centres, development may result in some soil sealing at urban greenfield sites. There is potential that development on some sites would offer an opportunity to remediate contaminated land.	-	-	?	?	?
7	Resource efficiency	No predicted effects.	-	-	-	-	-
8	Historic Environment	New retail development could have adverse effects on known or undiscovered historic and cultural heritage.	-	-	?	?	?
9	Landscape/ Townscape	Redevelopment of retail sites may help to improve local townscapes.	-	-	?	?	?
10	Health and Wellbeing	Increasing employment opportunities within the Borough could result in improved health and well-being of local residents. By encouraging growth within towns, residents may adopt active travel modes.	P	L	✓	✓	✓
11	Sustainable Locations	Focusing retail growth in the town centres supports the vitality and viability of the Borough and reduces the need to travel to access facilities.	P	L	✓	✓	✓
12	Community cohesion	SP6 supports the development of new neighbourhood centres in Hemel Hempstead, Berkhamsted and Tring which would include new local centres and neighbourhood centres for the local community. DM19 encourages a mix of uses to encourage vitality and viability of local centres. DM20 also aims to protect against the loss of halls, meeting places and other community facilities.	P	L	✓	✓	✓
13	Housing	No predicted effects	-	-	-	-	-
14	Sustainable prosperity	The development of town centre sites for retail and leisure would improve the vitality and viability of the local area. Protecting and expanding employment opportunities in the Borough would progress this objective by supporting the local economy. Significant positive effects have therefore been identified.	P	L	✓✓	✓✓	✓✓
15	Employment and skills	Protecting and expanding employment opportunities in the Borough should provide more local employment opportunities. Significant positive effects have therefore been identified.	P	L	✓✓	✓✓	✓✓
Mitigation within the plan:		The proposed Local Plan policies under the 'Employment Development' and 'Healthy Communities' sections should help to provide the number and range of job types and education opportunities in order to meet the identified needs of the Borough. The policies under 'Transport and Connectivity' would help mitigate against increased transport emissions by helping to enable sustainable transport options such as access to public transport.					

SA Objective	Assessment of Effect					
	Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
				In short term	In medium term	In long term
	<p>The 'Environment and Biodiversity' policies would minimise negative impacts on soil by preventing development which would result in harmful soil pollution, though this will not prevent soil sealing that would inevitably occur from developing greenfield sites.</p> <p>The policies covering 'Delivering Great Places' would help towards minimising the effects on the landscape, townscape and historic environment, including on designated and non-designated heritage assets and their settings, as well as seeking to provide enhancements.</p>					

Policy SP7 – Delivering Infrastructure

The specific scale and significance of impacts of “SP7 – Delivering Infrastructure” are dependent on the details of the Infrastructure Delivery Plan which will be published at the stage when the Local Plan is submitted for Examination.

This assessment does not ‘second-guess’ the specific infrastructure elements that will be included in the future Infrastructure Delivery Plan but instead considers the more generic effects that could result from Policy SP7, whilst at the same time recognising the types of effects which may result from different types of infrastructure.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Effects on biodiversity will depend on the type and scale of the new infrastructure and the biodiversity characteristics of the specific locations where the infrastructure is provided. The larger scale infrastructure developments are more likely to result in adverse effects than smaller developments. However some types of infrastructure could result in positive effects against this objective, for example new green infrastructure could result in ecological enhancements, whilst upgraded waste water treatment works could result in improved water quality, thereby having secondary positive effects on biodiversity.	-	-	?	?	?
2	Water	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of water infrastructure but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?
3	Flood risk	SP7 requires that new infrastructure be provided to avoid or mitigate impacts from the proposed development. This could include the provision of flood management infrastructure to reduce flood risk but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?
4	Climate Change	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of transport infrastructure to enable residents to adopt active travel modes and reduce greenhouse gas emissions but is dependent on the specifics of the Infrastructure Delivery Plan. It could be that new infrastructure results in increased greenhouse gas emissions, for example a new road which could result in increased traffic, or that it results in reduced growth in emissions, for example though the provision of new community facilities close to infrastructure close to existing/new communities.	-	-	?	?	?

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
5	Air Quality	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of transport infrastructure to enable residents to adopt active travel modes and reduce airborne emissions but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?	
6	Soils	No predicted effects.	-	-	-	-	-	
7	Resource efficiency	No predicted effects.	-	-	-	-	-	
8	Historic Environment	Effects on the historic environment will depend on the type and scale of the new infrastructure and the particular characteristics of the specific locations where the infrastructure is provided.	-	-	?	?	?	
9	Landscape/ Townscape	Effects on landscapes & townscapes will depend on the type and scale of the new infrastructure and the particular features/settings of the specific locations where the infrastructure is provided.	-	-	?	?	?	
10	Health and Wellbeing	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of healthcare facilities, open space and active travel infrastructure but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?	
11	Sustainable Locations	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of social infrastructure through closer integration of services with housing and jobs but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?	
12	Community cohesion	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of cultural facilities, schools and recreational facilities but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?	
13	Housing	No predicted effects	-	-	-	-	-	
14	Sustainable prosperity	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of local facilities and telecommunications infrastructure but is dependent on the specifics of the Infrastructure Delivery Plan.	-	-	?	?	?	
15	Employment and skills	SP7 requires that new infrastructure be provided to avoid placing additional burden on the existing infrastructure. This could include the provision of education and employment opportunities in the new community facilities but is dependent on the specifics of the Infrastructure Delivery Plan	-	-	?	?	?	

Policy SP8 – Neighbourhood Planning

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
1	Biodiversity	No predicted effects.	-	-	-	-	-	
2	Water	No predicted effects.	-	-	-	-	-	
3	Flood risk	No predicted effects.	-	-	-	-	-	
4	Climate Change	No predicted effects.	-	-	-	-	-	
5	Air Quality	No predicted effects.	-	-	-	-	-	
6	Soils	No predicted effects.	-	-	-	-	-	
7	Resource efficiency	No predicted effects.	-	-	-	-	-	
8	Historic Environment	No predicted effects.	-	-	-	-	-	
9	Landscape/ Townscape	No predicted effects.	-	-	-	-	-	
10	Health and Wellbeing	Planning at a neighbourhood level should help to provide the specific community facilities required to meet the needs of the individual Neighbourhood Plan areas, thereby helping to improve overall wellbeing.	P	L	✓	✓	✓	
11	Sustainable Locations	No predicted effects.	-	-	-	-	-	
12	Community cohesion	Planning at a neighbourhood level should help to provide the specific community facilities required to meet the needs of the individual Neighbourhood Plan areas.	P	L	✓	✓	✓	
13	Housing	Planning at a neighbourhood level should help to provide the specific housing needs faced by the individual Neighbourhood Plan areas.	P	L	✓	✓	✓	
14	Sustainable prosperity	Planning at a neighbourhood level should help towards providing the employment developments required to meet the needs of the individual Neighbourhood Plan areas.	P	L	✓	✓	✓	
15	Employment and skills	Planning at a neighbourhood level should help towards providing the jobs required to meet the needs of the individual Neighbourhood Plan areas.	P	L	✓	✓	✓	

Policy SP9 – Monitoring and Review

Policy-wide assessment:

Whilst this policy would help to ensure that the Local Plan policies are delivering against the Plan's vision and objectives, it is a procedural policy, rather than one which would result in 'changes on the ground'. As such it has therefore been assessed as having 'no predicted effects' on all the SA objectives.

CLIMATE CHANGE & SUSTAINABILITY

Policy SP10 – Climate Change Mitigation and Adaptation

DM22 - Sustainable Design and Construction

DM23 – Energy and Carbon Emissions Reductions in New Development

DM24 - Low Carbon Community Heat and Energy Networks

DM25 – Stand-alone renewable or Low Carbon Energy

DM26 - Carbon Offsetting

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Policy SP10 requires that the area of habitats that fix and store carbon are increased. There is also a requirement to use green infrastructure to reduce flood risk. These should all help to enhance biodiversity. DM25 requires that locally important wildlife sites (including ecological corridors) and features would not be adversely affected by renewable or low carbon energy schemes.	P	L	✓	✓	✓
2	Water	Policy DM22 has a requirement to minimise water usage during the construction and operation of new developments.	P	L	✓	✓	✓
3	Flood risk	Policy SP10 requires that development avoids areas of flood risk and that green infrastructure is used to reduce flood risk.	P	L	✓	✓	✓
4	Climate Change	Policies SP10, DM22, DM23, DM24, DM25, DM26 and DM27 include a wide range of requirements which are directly related to the reduction in greenhouse gas emissions and the adaptation to climate change. A significant positive effect has therefore been identified for the objective.	P	N	✓✓	✓✓	✓✓
5	Air Quality	Policy SP10 encourages the use of sustainable transport modes in all new development, which would help to result in improvements to local air quality.	P	L	✓	✓	✓
6	Soils	Policy SP10 prioritises the development of previously developed land which would help to protect the Borough's soil resource, which in addition to providing agricultural function acts as an important carbon store.	P	L	✓	✓	✓
7	Resource efficiency	Policies SP10 and DM22 include a wide range of requirements which are directly related to the efficient use of resources and minimisation of waste, both during the construction and operation phases of new developments. A significant positive effect has therefore been identified for the objective.	P	L	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
8	Historic Environment	Renewable energy schemes which are encouraged by Policy SP10 may have adverse effects on the historic environment – dependent on the heritage assets in proximity to any such schemes.	-	-	?	?	?
9	Landscape/ Townscape	Renewable energy schemes which are encouraged by Policy SP10 may have adverse effects on landscape and townscape, dependent on the specific schemes and the characteristics/constraints of the locations. However, DM25 requires that any proposals within the Chilterns AONB or its setting are of an appropriate scale and do not adversely affect the natural beauty or purpose of the AONB and that the overall visual effect on the landscape (including cumulative impacts and impact on sensitive landscapes) is acceptable.	-	-	?	?	?
10	Health and Wellbeing	Policy SP10 encourages the use of sustainable transport modes in all new development, which would help to facilitate the take-up of active travel modes. In relation to renewable and low carbon energy proposals, DM25 requires that any harm to residential or local amenity, including air quality, noise and light flicker is not substantial.	P	L	✓	✓	✓
11	Sustainable Locations	The requirement of SP10 to encourage the use of sustainable transport modes in all new development could be seen as positive against the sub-objective “To enable and encourage walking, cycling and the use of public transport”.	P	L	✓	✓	✓
12	Community cohesion	No predicted effects	-	-	-	-	-
13	Housing	No predicted effects	-	-	-	-	-
14	Sustainable prosperity	No predicted effects	-	-	-	-	-
15	Employment and skills	No predicted effects	-	-	-	-	-

ENVIRONMENT & BIODIVERSITY

NB: No Strategic Policy

DM27 - Landscape Character and Chilterns Area of Outstanding Natural Beauty

DM28 – Protection of Sites

DM29 – Protected Species and Priority Species and Habitats Policy

DM30 – Biodiversity Net Gain

DM31 - Chilterns Beechwoods Special Area of Conservation

DM32 – Development on the Ashridge Estate

DM33 - Protection and Enhancement of the River Character and Water Environment

DM34 – Flood Risk and Protection

DM35 - Protection from Environmental Pollution

DM36 – Tree Retention and Protection

DM37 – Landscaping on Development Sites

DM38 - Open Land

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	<p>Policies DM28 and DM29 provide protection to designated sites and protected/priority species and habitats, whilst Policy DM30 requires the delivery of an overall net-biodiversity gain of 10% and positive measures to support wildlife such as restoring degraded or lost ecosystems, offsetting to compensate for residual impacts, avoiding creating a biodiversity impact and minimising impacts that cannot be avoided.</p> <p>Policies DM31 and DM32 should ensure that development within the plan does not adversely affect the internationally important Chiltern Beechwoods SAC. DM31 would assist in conservation and enhancement of the biodiversity of the Chiltern Beechwoods SAC and DM32 would improve onsite management of visitors to the Ashridge Estate and conserve and protect the biodiversity of this site.</p>	P	L	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		Protection and enhancement of the water environment in DM33 would have secondary positive effects for biodiversity, as would SuDS provision requirements in DM34 and the pollution related environmental protection requirements of DM35. Tree retention and protection required by DM36 and the landscaping requirements for new developments in DM37 will also help to support this objective. Significant positive effects against this objective have therefore been identified in relation to these policies.					
2	Water	Policy DM33 requires that the water environment be managed by restoring water courses, avoiding damage of or abstraction from the Rivers Ver, Gade and Bulbourne, and locating development away from waterbodies, thereby directly supporting this objective. In addition, by restricting the types of development which can take place in flood risk areas and requiring measures for the control and reduction of surface water run-off, DM34 should help to protect the water environment, whilst DM35 aims to improve water quality standards. Significant positive effects against this objective have therefore been identified in relation to these policies.	P	R	✓✓	✓✓	✓✓
3	Flood risk	Policy DM34 should ensure that development: does not take place in Flood Zones 2 or 3 unless it is for a compatible use; does not result in increased flood risk elsewhere; and incorporates flood resistant and resilient measures. The policy should also ensure that any SuDS will be maintained throughout the lifetime of a new development. A significant positive effect has therefore been identified against this objective.	P	L	✓✓	✓✓	✓✓
4	Climate Change	DM36 and DM37 which require new development to incorporate new trees and landscaping support this objective through associated carbon sequestration and contributing to adaptation.	P	N	✓	✓	✓
5	Air Quality	DM31 requires that major development must contribute towards the Chiltern Beechwoods Air Quality Mitigation Scheme in order to avoid any adverse impact on air quality at the SAC. In line with DM35, new developments would as a minimum maintain air quality standards at AQMAs and any development which is expected to breach objectives for limiting pollutants must demonstrate mitigation or avoidance proposals. Significant positive effects against this objective have therefore been identified in relation to these policies.	P	L	✓✓	✓✓	✓✓
6	Soils	Soil quality standards would be maintained and opportunities would be taken to remediate contaminated land under DM35. A significant positive effect has been identified.	P	L	✓✓	✓✓	✓✓
7	Resource efficiency	No predicted effects	-	-	-	-	-
8	Historic Environment	No predicted effects	-	-	-	-	-

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
9	Landscape/ Townscape	DM27 requires that all development shall help conserve, restore or enhance the prevailing quality, character and condition of the landscape in Dacorum which particular attention to the Chilterns AONB where development would be refused except for in exceptional circumstances. DM35 seeks to limit and where possible avoid light pollution. The landscaping requirements for new development in DM37 would help to improve the local landscapes in areas affected by development which currently are of limited landscape/townscape value. DM38 would protect open land from residential development and require that any development on open land must not adversely affect character or environment of the setting. Significant positive effects has against this objective have therefore been identified in relation to these policies.	P	L	✓✓	✓✓	✓✓
10	Health and Wellbeing	DM31 and DM32 seek to protect the Chiltern Beechwoods and Ashridge Estate from suffering adverse effects associated with recreational use through the provision of new green spaces, SANGs, or Country Parks. This would provide additional open spaces for the Borough's new and existing residents, as would the protection of designated open space under DM38 – thereby supporting this objective. In addition, DM35 looks to minimise the impact of noise which could affect the wellbeing of residents.	P	L	✓	✓	✓
11	Sustainable Locations	No predicted effects	-	-	-	-	-
12	Community cohesion	The protection of designated Open Land required by DM38 would help to maintain the quality of life in urban areas.	P	L	✓	✓	✓
13	Housing	No predicted effects	-	-	-	-	-
14	Sustainable prosperity	No predicted effects	-	-	-	-	-
15	Employment and skills	No predicted effects	-	-	-	-	-

THE GREEN BELT AND RURAL AREA

SP11 - Development in the Green Belt

DM39 - Limited Infilling in Selected Small Villages in the Countryside

DM40 - Bovingdon Airfield

This assessment considers the generic effects associated with the requirements of the Green Belt and Rural Area policies and not any site-specific effects associated with the individual Growth Areas identified in Policy SP11. The site-specific effects are included in Appendix E of this report in the section covering Countryside Proposals and Sites. The exception to this rule is Bovingdon Airfield (Cy06), where the Local Plan requirements are provided in Policy DM40 rather than in the Countryside Proposals and Sites section of the Local Plan. In that case the effects are assessed in the table below.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Effects on biodiversity will be dependent on the biodiversity value of individual development sites. Where development takes place on greenfield sites there could be loss of biodiversity, although it should be recognised that previously developed sites can have biodiversity value, which needs to be taken into account. However, by restricting levels of development in the Green Belt the policies would minimise the negative effects against this objective.	-	-	?	?	?
2	Water	Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?
3	Flood risk	Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?
4	Climate Change	Restricting development in the Green Belt will result in development taking place in more sustainable locations in the Borough which would help to reduce the need to travel to access services, facilities and employment, thereby reducing growth in greenhouse gas emissions.	P	N	✓	✓	✓
		Expansion of specified General Employment Areas in the Green Belt as supported in principle by SP11 may encourage out-commuting by car from the Borough's settlements to access employment. This would contribute to a growth in greenhouse gas emissions.	P	N	✗	✗	✗
5	Air Quality	No predicted effects	-	-	-	-	-

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
6	Soils	Any development on greenfield sites in the Green Belt would result in soil sealing and the degradation/loss of soils. However, by restricting levels of development in the Green Belt the policies would minimise the negative effects against this objective.	P	L	x	x	x	
7	Resource efficiency	No predicted effects	-	-	-	-	-	
8	Historic Environment	Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?	
9	Landscape/ Townscape	Policy SP11 restricts inappropriate development in the Green Belt. DM39 would allow limited infilling in four of the Borough's small villages which lie in the Green Belt, however the policy is restrictive in the type and location of new development which would be permitted, thereby protecting 'villagescapes' and supporting this objective. DM40 requires that any development at Bovingdon Airfield would be carefully controlled and would minimise impact on the landscape.	P	L	✓	✓	✓	
		Developments in the Green Belt could have adverse effects on the local landscape. Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?	
10	Health and Wellbeing	No predicted effects.	-	-	-	-	-	
11	Sustainable Locations	SP11 requires that any development in the Green Belt only be allowed in the specific circumstances outlined in DM39 and DM40. This would result in residential developments being focused within the larger settlements. This should mean that homes, employment and other services are within close proximity and therefore reduce the need to travel further.	P	L	✓	✓	✓	
12	Community cohesion	SP11 requires that any development in the Green Belt only be allowed in the specific circumstances outlined in DM39 and DM40. This would result in increased development within the larger settlements, meaning that homes, employment and other services are easily accessible, particularly for those without access to private transport. The Green Belt is valued by the local community and its protection would therefore have a positive effect on this objective. A new burial space and crematorium, which the policy supports, would provide a new valued community facility.	P	L	✓	✓	✓	
13	Housing	Policies SP11 and DM39 would allow limited housing development in small villages in the Green Belt, which would help to meet local needs.	P	L	✓	✓	✓	

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
14	Sustainable prosperity	The policies support some commercial developments in the Green Belt which would have local economic benefits including job provision.	P	L	✓	✓	✓
15	Employment and skills	The policies support some commercial developments in the Green Belt which would have local economic benefits including job provision.	P	L	✓	✓	✓

Mitigation within the plan:	<p>The proposed Local Plan policies under 'Transport and Connectivity' would help mitigate against increased transport emissions by helping to enable sustainable transport options such as access to public transport.</p> <p>The 'Environment and Biodiversity' policies would minimise negative impacts on soil by preventing development which would result in harmful soil pollution, though this will not prevent soil sealing that would inevitably occur from developing greenfield sites.</p>
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SP12 - Development in the Rural Area

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	No predicted effects	-	-	-	-	-
2	Water	No predicted effects	-	-	-	-	-
3	Flood risk	No predicted effects	-	-	-	-	-
4	Climate Change	SP12 allows proposals for appropriate renewable energy projects within the rural area.	P	L	✓	✓	✓
5	Air Quality	No predicted effects	-	-	-	-	-
6	Soils	No predicted effects	-	-	-	-	-
7	Resource efficiency	No predicted effects	-	-	-	-	-
8	Historic Environment	Effects against this objective are uncertain as they depend on the location of development relative to historic assets (above and below ground). The provision of essential utilities below the ground could impact on archaeology.	-	-	?	?	?
9	Landscape/ Townscape	Effects against this objective are uncertain as they depend on the type, scale and location of development. The provision of essential utilities above ground could affect local landscapes.	-	-	?	?	?
10	Health and Wellbeing	Policy SP12 would permit appropriate social and leisure uses as well as countryside recreation uses in the rural areas, which would encourage outdoor activity and therefore support this objective.	P	L	✓	✓	✓
11	Sustainable Locations	No predicted effects	-	-	-	-	-
12	Community cohesion	Appropriate social, community and leisure uses would be permitted in rural areas under SP12.	P	L	✓	✓	✓
13	Housing	Some appropriate housing development would be permitted in the rural area under SP12.	P	L	✓	✓	✓
14	Sustainable prosperity	Some appropriate employment development would be permitted in the rural area under SP12. SP12 supports the use of the rural area for agricultural and forestry industries.	P	L	✓	✓	✓
15	Employment and skills	Some appropriate employment development would be permitted in the rural area under SP12. SP12 supports the use of the rural area for agricultural and forestry industries.	P	L	✓	✓	✓

DELIVERING GREAT PLACES

SP13 - Delivering High Quality Design

DM41 - Height of Buildings

DM42 - Crime and Security

DM43 – Historic Environment

DM44 - Development Affecting Non-Designated Heritage Assets

DM45 – Heritage assets with Archaeological Interest

DM46 - Conservation Areas

DM47 - Listed Buildings

DM48 - Advertisements

DM49 - Canalside Environment and Recreational Moorings

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Policy DM49 requires that new developments, facilities and improved access shall not have adverse effects on the canal’s nature conservation interest.	P	L	✓	✓	✓
2	Water	No predicted effects	-	-	-	-	-
3	Flood risk	No predicted effects	-	-	-	-	-
4	Climate Change	SP13 promotes environmental sustainability to be embedded into the design and layout of any new development. Enhancements to the local historic and natural environment may increase the visitor economy and encourage the growth of the local tourism sector, this may have an adverse effect of inducing more car trips. The effects will be dependent on type, scale and location of the development and the levels of use of sustainable travel options.	-	-	?	?	?
5	Air Quality	Enhancements to the local historic and natural environment may increase the visitor economy and encourage the growth of the local tourism sector, this may have an adverse effect on air quality through inducing more car	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		trips. The effects will be dependent on type, scale and location of the development and the levels of use of sustainable travel options.					
6	Soils	No predicted effects	-	-	-	-	-
7	Resource efficiency	No predicted effects	-	-	-	-	-
8	Historic Environment	Policies under this theme directly support this objective. DM41 requires that the height of new buildings should reinforce and enhance local character and no development would adversely affect conservation areas or listed buildings; a principle which is echoed in DM46 and DM47. The protection and enhancement of the historic environment is emphasised under DM43. Policies DM44 and DM45 seek to protect those heritage assets which are non-designated and those of archaeological interest, ensuring that no assets are lost or damaged by development. The Borough includes a number of conservation areas and developments in or near these areas would be permitted only if they preserve or enhance the character and appearance of the area under DM46. Significant positive effects have been identified.	P	L	✓✓	✓✓	✓✓
9	Landscape/ Townscape	Policy SP13 should ensure that new development reflects the character of the local area and enhances and complements its surroundings. Policy DM41 restricts the height of buildings outside of the main urban areas and ensures that any development is sensitive to the distinctive qualities, topography and identity of the area which would have benefits for the landscape. DM46 seeks to preserve the character of conservation areas, ensuring that the local townscape is not adversely affected by development. Improvements to the canalside environment under DM49 would have a positive effect on townscape. Significant positive effects have been identified.	P	L	✓✓	✓✓	✓✓
10	Health and Wellbeing	Improving or conserving the attractiveness of the Borough under SP13 should support the wellbeing of the local community. SP13 seeks to give prominence to the creation of healthy places which enable active lifestyles.	P	L	✓	✓	✓
11	Sustainable Locations	The creation of compact neighbourhoods which are connected to existing settlements, required by SP13, would support this objective as would the support provided by DM41 for tall and taller buildings in opportunity areas in Hemel Hempstead such as the Town Centre and Two Waters which are the Borough's most sustainable locations.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
12	Community cohesion	SP13 supports the creation of the Borough as a 'place for all' which aims to integrate and include people from all backgrounds. DM42 aims to design all development to reduce the opportunity for crime and reduce the fear of crime itself, which supports this objective. Significant positive effects have therefore been identified for this objective for the 'Delivering Great Places' policies.	P	L	✓✓	✓✓	✓✓
13	Housing	No predicted effects	-	-	-	-	-
14	Sustainable prosperity	Creating attractive and vibrant centres would support the local economy by continuing to make the Borough an attractive place to work and live. Improvements to the canalside environment and the Borough's heritage assets may attract more visitors which would support the local economy and increase employment opportunities.	P	L	✓	✓	✓
15	Employment and skills	Improvements to the urban environment which attract increased footfall to town centres, and potentially more tourists, could result in increased employment opportunities.	P	L	✓	✓	✓

TRANSPORT AND CONNECTIVITY

[NB: No SP policy]

DM50 - Transport and Movement

DM51 – Supporting and protecting land for transport interventions

DM52 – Movement and Access

DM53 – Walking and Cycling

DM54 – Public Transport

DM55 - Parking Provision – Residential

DM56 - Parking Provision – Commercial

DM57 – Digital Communications

DM58 – Mobile Communications

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Effects on biodiversity will depend on the type and scale of any new transport infrastructure and the biodiversity characteristics of the specific locations where transport infrastructure is provided or enhanced. DM58 should help to minimise the effects on nature conservation sites from new telecommunications infrastructure.	-	-	?	?	?
2	Water	No predicted effects	-	-	-	-	-
3	Flood risk	Effects related to flood risk will depend on the specific locations where transport infrastructure is provided or enhanced.	-	-	?	?	?
4	Climate Change	Sustainable Transport Strategies have been developed for Hemel Hempstead, Berkhamsted and Tring which aim to make the transport network more attractive for walking and cycling and improving access to public transport. By protecting land associated with transport corridors DM51 will help to enable sustainable transport interventions to be taken forward in the future. Improvements to transport corridors may help reduce	P	N	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		congestion which has environmental benefits. DM50, DM52 and DM53 all focus on reducing the need to travel overall and also ensure that transport is accessible to all user groups, prioritising the movement of pedestrians and cyclists. DM54 encourages the use of public transport by ensuring that public transport is convenient and safe. By reducing the need to travel and encouraging alternative modes of travel other than the car, the growth in greenhouse gas emissions may be reduced. DM51 requires sustainable transport measures to be delivered early on in the delivery of new developments which will help to enable sustainable travel behaviours from the outset. Significant positive effects have been identified for this objective.					
5	Air Quality	Sustainable Transport Strategies have been developed for Hemel Hempstead, Berkhamsted and Tring which aim to make the transport network more attractive for walking and cycling and improving access to public transport. By protecting land associated with transport corridors DM51 will help to enable sustainable transport interventions to be taken forward in the future. Improvements to transport corridors may help reduce congestion and aid in improving air quality. DM50, DM52 and DM53 all focus on reducing the need to travel overall and also ensure that transport is accessible to all user groups, prioritising the movement of pedestrians and cyclists. Developments which may give rise to air quality concerns would be given consideration under DM52. By reducing the need to travel and encouraging alternative modes of travel other than the car, the growth in airborne emissions may be reduced.	P	N	✓	✓	✓
6	Soils	The effects on soils would be dependent on the level of 'land-take' required and the characteristics of the soils in areas where any transport infrastructure is provided or enhanced.	-	-	?	?	?
7	Resource efficiency	No predicted effects	-	-	-	-	-
8	Historic Environment	Reducing traffic congestion and associated air pollutants in the Borough should have a positive effect on this objective by helping to protect and maintain the Borough's historic environment. DM58 should help to minimise the effects on heritage assets from new telecommunications infrastructure.	P	L	✓	✓	✓
		Effects will depend on the heritage assets and their setting of the specific locations where transport infrastructure is provided or enhanced.	-	-	?	?	?

SA Objective	Assessment of Effect					
	Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
				In short term	In medium term	In long term
	The provision of parking spaces under DM56 in civic areas may dominate the street scene. However, measures under DM50, DM52 and DM53 encourage the use of alternative transport modes which may reduce the number of cars in the civic areas.					
9	Landscape/ Townscape Effects will depend on the landscape/townscape characteristics of the specific locations where transport infrastructure is provided or enhanced. The provision of parking spaces under DM56 in civic areas may dominate the street scene and affect the local townscape. However, measures under DM50, DM52 and DM53 encourage the use of alternative transport modes which may reduce the number of cars in the civic areas. DM58 should help to minimise the effects on the Chilterns AONB from new telecommunications infrastructure.	-	-	?	?	?
10	Health and Wellbeing The wide range of measures to encourage more active forms of travel such as increasing use of public transport, walking and cycling could allow for increased daily physical activity. DM52 seeks for schemes to maintain, enhance and integrate with existing Rights of Way which will further enable healthy travel/recreation options. The level of the effects against this objective will however depend on the level of behavioural change that would be required to make use of the active travel modes enabled by this policy.	P	L	✓	✓	✓
11	Sustainable Locations The requirement in DM50 that new development should be concentrated in accessible locations supports this objective. The wide range of measures to increase use of public transport, walking and cycling, including requiring new development to be concentrated in accessible locations, could improve access to services and facilities whilst promoting more sustainable modes of transport could encourage more active travel.	P	L	✓	✓	✓
12	Community cohesion The requirements of the policies under this theme which support the increased use of sustainable modes of travel should help to improve the overall quality of life in urban areas, improve the ease of access to services and facilities for those without access to a private car and increase social interactions within local communities – all of which will contribute towards positive effects against this objective.	P	L	✓	✓	✓
13	Housing No predicted effects.	-	-	-	-	-
14	Sustainable prosperity Reducing traffic congestion and measures to encourage the use of sustainable transport should improve the quality of the urban environment thereby supporting the local economy. Reducing congestion should also be beneficial for local businesses as deliveries, customers and employees are less likely to become caught in traffic.	P	L	✓	✓	✓

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
		Provision of parking under DM56 would provide adequate space for commercial vehicles to access businesses. DM57 ensures FTTP infrastructure would be supplied which is essential for businesses.						
15	Employment and skills	The wide range of measures to increase use of public transport, walking and cycling could improve access to employment opportunities.	P	L	✓	✓	✓	
Mitigation within the plan:		The proposed Local Plan policies under 'Delivering Great Places' would help towards minimising the effects on the landscape, townscape and historic environment, including on designated and non-designated heritage assets and their settings, as well as seeking to provide enhancements.						

HEALTHY COMMUNITIES

[NB: No SP policy]

DM59 – Health Facilities

DM60 – Health Impact Assessments

DM61 – Education

DM62 – Sport and Leisure

DM63 – Open Space Provision

DM64 - Community Facilities

DM65 - Community Stewardship and Management

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Policy DM63 ensures the provision of open space and play space at new developments of 25 homes or more. Providing local open space would help to avoid increased pressure on sites of importance for biodiversity such as the Ashridge Estate ¹⁷¹ .	P	L	✓	✓	✓
2	Water	No predicted effects.	-	-	-	-	-
3	Flood risk	No predicted effects.	-	-	-	-	-
4	Climate Change	No predicted effects.	-	-	-	-	-
5	Air Quality	No predicted effects.	-	-	-	-	-
6	Soils	No predicted effects.	-	-	-	-	-
7	Resource efficiency	No predicted effects.	-	-	-	-	-

¹⁷¹ The full extent of the potential effects on the SAC at Ashridge Estate will be assessed in the Habitat Regulations Assessment

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
8	Historic Environment	No predicted effects.	-	-	-	-	-	
9	Landscape/Townscape	Policy DM63 ensures the provision of open space and play space at new developments of 25 homes or more and protects against the loss of existing designated open space. Providing local open space would have benefits for the local landscape.	P	L	✓	✓	✓	
10	Health and Wellbeing	A range of measures exist to prioritise the health and wellbeing of residents in the Borough. DM59 ensures access to healthcare by expanding or improving healthcare facilities whilst other more preventative measures aim to improve health and wellbeing of all residents. Health Impact Assessments required by DM60 would assess the health impact of new developments to avoid negative impacts on health. Sport and leisure facilities would be retained where possible and new facilities are encouraged alongside new residential and employment developments under DM62. DM63 requires that new open space will be provided alongside any new residential development of 25 or more units and ensures that all residents will have access to open space for recreation. Significant positive effects have been identified.	P	L	✓✓	✓✓	✓✓	
11	Sustainable Locations	Policy DM64 requires that new community facilities are located in suitable locations, served by a choice of sustainable travel options.	P	L	✓	✓	✓	
12	Community cohesion	Policy DM64 protects existing community facilities and supports the development of new community facilities which are located in suitable locations and developed at the same time as new residential developments. Policy DM65 encourages community stewardship with a long-term strategy for maintenance of community assets and open space.	P	L	✓	✓	✓	
13	Housing	No predicted effects.	-	-	-	-	-	
14	Sustainable prosperity	The support for the protection of existing education, sports and leisure and community facilities and the provision of new facilities provided by DM61, DM62 and DM64 should help to support the local economy.	P	L	✓	✓	✓	
15	Employment and skills	DM61 requires the provision of new educational facilities or expansion of existing facilities which would help serve the needs of new residents and would generate new employment opportunities. The same is the case for DM62 in relation to sports and leisure facilities and DM64 in relation to community facilities.	P	L	✓	✓	✓	

HEMEL HEMPSTEAD DELIVERY STRATEGY

SP14 – Delivering Hemel Garden Communities

SP15 – Spatial Strategy for Delivery in Hemel Hempstead

SP16 – North and East of Hemel Hempstead Growth Areas

SP17 – Hemel Hempstead Town Centre

SP18 – Two Waters Opportunity Area

SP19 – Maylands Business Park

NB: The specific effects associated with the site allocations included in Policy SP15 have not been incorporated into the assessment of these Hemel Hempstead related policies. Those assessments can be found in the assessments of the ‘Proposals and Sites’ section of the Local Plan in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	The majority of the development associated with the North and East of Hemel Growth Areas would be on greenfield land with associated potential adverse effects on biodiversity. This would also be the case for any greenfield sites elsewhere in Hemel Hempstead. However it should also be recognised that any development on previously developed land could also result in adverse effects on biodiversity. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though none of the sites in Hemel Hempstead proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity. The proximity of the North of Hemel Growth Area to the Chiltern Beechwoods SAC at the Ashridge Estate could mean that the SAC is subject to increased levels of recreational pressure. This issue will be investigated and assessed through a separate Habitats Regulations Assessment.	-	-	?	?	?
		The provision of strategic green infrastructure provides opportunities for biodiversity gains.	P	L	✓	✓	✓
2	Water	No strategy specific predicted effects.	-	-	-	-	-
3	Flood risk	Parts of the Two Waters area lie in flood risk zones, which may increase due to climate change. Effects will be dependent on how development on any potentially affected site is designed, including opportunities for	-	-	?	?	?

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
		betterment. Enhancements to green infrastructure which are required by SP18 may help to reduce overall flood risk, dependent on their scale and location.						
4	Climate Change	<p>The delivery strategy and its supporting policies include a wide range of requirements which would result in positive effects in terms of mitigation and adaptation to climate change.</p> <p>These include the requirement for high densities of development in the most sustainable locations, as well as mixed-use developments, which will reduce the need to travel and the provision of infrastructure for sustainable modes of travel (i.e. non-car travel) and the requirements to deliver integrated and accessible developments with walking, cycling and public transport prioritised – in line with the requirements of the Hemel Hempstead Sustainable Transport Strategy.</p> <p>The level of impact on this objective will however be dependent on the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this strategy.</p> <p>The provision of significant levels of new employment space across Hemel Hempstead will reduce the need to travel to access employment opportunities – thereby reducing associated growth in greenhouse gas emissions.</p> <p>The strategy and its supporting policies also place considerable emphasis on reduced energy consumption in new developments and the delivery of sustainable energy and power infrastructure, as well as the delivery of significant environmental enhancement to ensure climate resilience.</p> <p>Significant positive effects against this objective have therefore been identified in relation to this strategy and its supporting policies.</p>	P	N	✓✓	✓✓	✓✓	
		The provision of 10,688 new homes and high levels of employment growth which are promoted by the strategy will inevitably result in increased levels of greenhouse gas emissions from increased levels of traffic and from energy usage of new housing and employment developments.	P	N	x	x	x	

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
5	Air Quality	The focus provided by the delivery strategy and its supporting policies on reducing the need to travel and encouraging sustainable modes of travel will help to reduce levels of growth of airborne pollutants – although the level of impact on this objective will be dependent on the types of infrastructure provided alongside growth and the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this strategy. New development, particularly in the Two Waters area, could result in the exacerbation of air quality issues at the two AQMAs at Lawn Lane and London Road, although SP18 has a requirement that development will deliver measures to reduce environmental pollution and improve air quality, particularly through the AQMA around London Road.	-	-	?	?	?
		The provision of 10,688 new homes and high levels of employment growth which are promoted by the strategy will inevitably result in increased levels of pollutant emissions from increased levels of traffic and heating systems associated with the new housing and employment developments.	P	N	x	x	x
6	Soils	The strategy seeks to maximise levels of development in the existing urban area and in so doing will reduce the need to develop greenfield sites. In addition the redevelopment of previously developed sites could result in some remediation of contaminated land.	P	L	✓	✓	✓
		The strategy relies on development to the north of Hemel Hempstead on greenfield sites, which will result in soil loss and sealing.	P	L	x	x	x
7	Resource efficiency	The strategy and supporting policies require that development under Hemel Garden Communities will need to be designed to minimise waste in construction and operation, and enable reuse and recycling of materials. In addition a new Waste Recycling Centre is proposed in the strategy which will help to encourage and enable residents to increase their levels of recycling. Furthermore, requirements to generate energy from renewable and low carbon sources also support this objective.	P	L	✓	✓	✓
8	Historic Environment	Delivering the growth proposed in SP20 could have adverse effects on the historic environment, these effects being specific to the heritage assets and their settings associated with individual development sites though none of the sites in Hemel Hempstead proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on the historic environment.	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
9	Landscape/ Townscape	The strategy would require 10,688 homes to be built on greenfield sites on the edge of Hemel Hempstead which would have negative impacts for the landscape. Development would extend Hemel Hempstead into open countryside and potentially affect the setting of the Chilterns AONB to which some of the new developments would be adjacent.	P	L	x	x	x
		By maximising the levels of development in the existing urban areas the need to develop on greenfield sites would be minimised. Provision of green spaces at new developments including delivery of SANGs, if required, could bring local landscape benefits.	P	L	✓	✓	✓
10	Health and Wellbeing	The principles in the strategy and supporting policies should help to enable healthy lifestyles, including through the promotion and facilitation of active travel modes and the provision of new open spaces, a country park and green infrastructure. The reconfiguration of the Hospital site to deliver up to date health facilities also supports this objective.	P	L	✓	✓	✓
11	Sustainable Locations	By supporting higher densities and increased heights of housing development in the Town Centre (SP17) and the Two Waters area (SP18) the strategy seeks to maximise the amount of development in the Borough's most sustainable locations. In addition the strategy promotes mixed-use development of one type or other in all the growth areas which further supports this objective through closer integration of housing, jobs and services. In addition the strategy encourages well-designed mixed-use developments in the heart of the urban areas and supports the provision of new local centres as part of new developments. Significant positive effects against this objective have therefore been identified in relation to this strategy and its supporting policies.	P	L	✓✓	✓✓	✓✓
12	Community cohesion	The strategy should have a positive effect against this objective, given the range of measures which will provide benefits for the existing and new communities in Hemel Hempstead. Strategic sites proposed for Hemel Hempstead include provision for new social infrastructure, including new primary schools, a new secondary school, neighbourhood centres, community hubs and a new cemetery and crematorium. SP16 requires that development in the North and East of Hemel Hempstead Growth Areas will involve community engagement processes – this being a Garden Community principle. Enabling appropriate new development in Hemel Hempstead Town Centre would promote the vitality and vibrancy of the town and would have positive effects against this objective.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
13	Housing	<p>SP15 supports the addition of at least 10,688 new dwellings over the plan period in Hemel Hempstead, which would meet the Borough's housing needs and be able to deliver inclusive, multi-generational communities with a mix of dwelling sizes, tenures and types, including provision for self and custom-built homes, lifetime homes, and genuinely affordable and starter homes.</p> <p>Significant positive effects against this objective have therefore been identified in relation to this strategy and its supporting policies.</p>	P	L	✓✓	✓✓	✓✓
14	Sustainable prosperity	<p>The strategy and its supporting policies support significant levels of employment growth across Hemel Hempstead, most notably in the Maylands area, but not limited to this area - for example new office and industrial use is planned for the Two Waters area. The new development would provide support for the area's knowledge based economy as well as the office and industrial sectors.</p> <p>In addition the development of 10,688 new dwellings over the plan period in Hemel Hempstead would help to support the vitality and viability of Hemel Hempstead's existing local economy as well as enabling its growth.</p> <p>Significant positive effects against this objective have therefore been identified in relation to this strategy and its supporting policies.</p>	P	L	✓✓	✓✓	✓✓
15	Employment and skills	<p>The economic growth and the support for the local economy provided by the additional housing described in the assessment for SA14 above would provide new jobs for the area and in so doing reduce the need for residents to commute to other areas for work.</p> <p>The support for the knowledge based economy should help to provide training opportunities.</p> <p>The strategy also includes provision for new primary and secondary schools as part of new developments which supports this objective.</p> <p>Significant positive effects against this objective have therefore been identified in relation to this strategy and its supporting policies.</p>	P	L	✓✓	✓✓	✓✓
Mitigation within the plan:		<p>See mitigation identified for Policy SP2.</p> <p>In addition to that mitigation, DM34 – Flood Risk and Protection and its accompanying mitigation measures should ensure that flood risk in Hemel Hempstead is not increased and that built development is located in areas at lowest risk of flooding.</p>					

SP20 – Delivering Growth in Berkhamsted

SP21 – Delivering Growth in South Berkhamsted

SP22 – Delivering Growth in the West of Berkhamsted

This assessment considers the effects of the Berkhamsted Delivery Strategy and does not consider the generic effects that additional housing would generate, which are covered in the assessment for Policy SP4. The effects associated with specific Berkhamsted site allocations are considered under the assessments for the ‘Proposals and Sites’ section of the Draft Local Plan. These site assessments can be found in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	There is limited opportunity for development on previously developed land and the bulk of planned growth would be met through urban extension on greenfield land which has some biodiversity value. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though none of the sites in Berkhamsted proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity. The proximity of Berkhamsted to the Chiltern Beechwoods SAC at the Ashridge Estate could mean that the SAC is subject to increased levels of recreational pressure. This issue will be investigated and assessed through a separate Habitats Regulations Assessment.	-	-	?	?	?
		SP21 and SP22 require that the extensions to South and West Berkhamsted should deliver strategic green infrastructure, which will have positive effects for biodiversity. In addition, the provision of new open space and SANGs, if required, as part of new developments could help to reduce recreational pressure on sites with biodiversity value, for example at the nearby Ashridge Estate ¹⁷² .	P	L	✓	✓	✓
2	Water	No strategy specific predicted effects.	-	-	-	-	-

¹⁷² The full extent of the potential effects on the SAC at Ashridge Estate will be assessed in the Habitat Regulations Assessment

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
3	Flood risk	No strategy specific predicted effects, although the masterplans for delivering the Place Strategies will require the provision of comprehensive green infrastructure networks and in so doing will help to reduce overall flood risk.	-	-	-	-	-
4	Climate Change	In line with Garden City Principles, SP21 and SP22 would ensure that new developments promote sustainable travel choices and deliver integrated and accessible development with walking, cycling and public transport prioritised, which should reduce reliance on the car and therefore reduce the growth in greenhouse gas emissions. The level of impact on this objective will however be dependent on the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this policy. The requirements in SP21 and SP22 relating to generating energy from renewable and low carbon sources and delivering other significant environmental enhancement to ensure climate resilience would also support this objective.	P	N	✓	✓	✓
		The provision of 2,200 new homes which are promoted by the strategy will inevitably result in increased levels of greenhouse gas emissions from increased levels of traffic and from energy usage of new housing.	P	N	x	x	x
5	Air Quality	In line with Garden City Principles, SP21 and SP22 ensure that new developments would include a comprehensive green infrastructure network and promote sustainable travel choices which should reduce reliance on the car and therefore reduce the growth in airborne emissions. The level of impact on this objective will be dependent on the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this strategy. An Air Quality Action Plan for the Northchurch Air Quality Management Area is being developed to identify actions and mitigation measures to improve air quality generally in the town and the Local Plan will be required to support delivery of these measures.	-	-	?	?	?
6	Soils	Many of the sites identified in SP20 are major urban extensions, given that there is limited opportunity for development on previously developed land, meaning the bulk of development will take place on greenfield land, resulting in soil sealing.	P	L	x	x	x
7	Resource efficiency	SP21 and SP22 require delivery of an exemplar in sustainable living with a particular focus on reducing energy consumption as well as generating energy from renewable and low carbon sources, thereby supporting this objective.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
8	Historic Environment	Delivering the growth proposed in SP20 could have adverse effects on the historic environment, these effects being specific to the heritage assets and their settings associated with individual development sites though none of the sites in Berkhamsted proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on the historic environment.	-	-	?	?	?
9	Landscape/ Townscape	The strategy would require 1,750 homes to be built on greenfield sites on the edge of Berkhamsted which would have negative impacts for the landscape. Development would extend Berkhamsted into open countryside and potentially affect the setting of the Chilterns AONB to which some of the new developments would be adjacent.	P	L	x	x	x
		By expanding Berkhamsted primarily to the south and west, impact on the most sensitive landscapes would be minimised. Provision of green spaces at new developments including delivery of SANGs, if required, could bring local landscape benefits.	P	L	✓	✓	✓
10	Health and Wellbeing	SP20 indicates that all of Berkhamsted's proposed urban expansions would include new public open space which would help to address the current deficiency in the town and support this objective, as would the requirements of both SP21 and SP22 to deliver a comprehensive green infrastructure network. In addition, the provision of green infrastructure and plans to provide walkable neighbourhoods may encourage the adoption of active travel to access facilities and services, as would the delivery of integrated and accessible developments with walking, cycling and public transport prioritised, these being a requirement of SP21 and SP22.	P	L	✓	✓	✓
11	Sustainable Locations	Given the lack of available sites to deliver new development within the town boundary, the proposed locations for large new developments offer the next most sustainable locations to deliver the housing growth, when also taking into account other factors, such as the greater landscape sensitivity of potential sites of the east of Berkhamsted and accessibility issues associated with sites to the north. The implementation of the measures in the Berkhamsted and Tring Transport Strategy should help to ensure that services and facilities are accessible by sustainable modes of transport.	P	L	✓	✓	✓
12	Community cohesion	Strategic sites proposed for Berkhamsted include provision for new primary schools, land for a new secondary school, and a community hub. Enabling appropriate new development in Berkhamsted Centre and Gossoms End/ Billet Lane would promote the vitality and vibrancy of the local centre and would have positive effects against this objective.	P	L	✓	✓	✓
13	Housing	SP20 supports the addition of 2,200 new dwellings over the plan period in Berkhamsted.	P	L	✓✓	✓✓	✓✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
14	Sustainable prosperity	The provision of 2,200 new homes would help to support the viability and vitality of Berkhamsted's local economy. Maintaining and diversifying the shopping and service role of Berkhamsted Town Centre would help to boost the local economy. Enabling appropriate development at General Employment Areas would be beneficial to the local economy.	P	L	✓	✓	✓
15	Employment and skills	Enabling appropriate new development at Northbridge Road and River Park General Employment Areas would be beneficial to the local economy and could generate new employment opportunities. The strategy includes provision for new primary and secondary schools as part of new developments which supports this objective.	P	L	✓	✓	✓
Mitigation within the plan:		See mitigation identified for Policy SP2.					

SP23 – Delivering Growth in Tring

SP24 – Delivering Growth in East Tring

SP25 – Delivering Growth at South East Tring

This assessment considers the effects of the Tring Delivery Strategy and does not consider the generic effects that additional housing would generate, which are covered in the assessment for Policy SP4. The effects associated with specific Tring site allocations are considered under the assessments for the ‘Proposals and Sites’ section of the Draft Local Plan. These site assessments can be found in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	There is limited opportunity for development on previously developed land and the bulk of planned growth would be met through urban extension on greenfield land which has some biodiversity value. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though none of the sites in Tring proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity. The proximity of Tring to the Chiltern Beechwoods SAC at the Ashridge Estate could mean that the SAC is subject to increased levels of recreational pressure. This issue will be investigated and assessed through a separate Habitats Regulations Assessment. Green infrastructure would provide an ecological buffer between developments and the Grand Union Canal which runs by Tring.	-	-	?	?	?
		SP24 and SP25 require that the extensions to Tring should deliver strategic green infrastructure, which will have positive effects for biodiversity. In addition, the provision of new open space and SANGs, if required, as part of new developments could help to reduce recreational pressure on sites with biodiversity value, for example at the nearby Ashridge Estate. ¹⁷³	P	L	✓	✓	✓
2	Water	No strategy specific predicted effects.	-	-	-	-	-

¹⁷³ The full extent of the potential effects on the SAC at Ashridge Estate will be assessed in the Habitat Regulations Assessment

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
3	Flood risk	No strategy specific predicted effects although the masterplans for delivering the Place Strategies will require the provision of comprehensive green infrastructure networks and in so doing will help to reduce overall flood risk.	-	-	-	-	-
4	Climate Change	Tring Station is located at a distance from the town centre. The strategy proposes to extend Tring towards the station and provide sustainable transport links which may reduce reliance on the car and reduce the growth in greenhouse gas emissions. The strategic policy includes provision for upgrades to walking and cycling infrastructure throughout the town. In line with Garden City Principles, SP24 and SP25 would ensure that new developments promote sustainable travel choices and deliver integrated and accessible development with walking, cycling and public transport prioritised, which should reduce reliance on the car and therefore reduce the growth in greenhouse gas emissions. The level of impact on this objective will however be dependent on the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this strategy. The provision of a new General Employment Area would provide additional jobs in Tring, thereby helping to reduce travel distances to work. This would have positive effects in relation to reducing the levels of growth in greenhouse gas emissions. The requirements in SP24 and SP25 relating to generating energy from renewable and low carbon sources and delivering other significant environmental enhancement to ensure climate resilience would support this objective.	P	N	✓	✓	✓
		The provision of 2,700 new homes and new employment growth which are promoted by the strategy will inevitably result in increased levels of greenhouse gas emissions from increased levels of traffic and from energy usage of new housing and employment developments.	P	N	✗	✗	✗
5	Air Quality	Tring Station is located at a distance from the town centre. The strategy proposes to extend Tring towards the station and provide sustainable transport links which may reduce reliance on the car and reduce the growth in airborne emissions. The strategic policy includes provision for upgrades to walking and cycling infrastructure throughout the town. The level of impact on this objective will be dependent on the level of behavioural change that would be required to make use of the sustainable travel modes enabled by this strategy.	-	-	?	?	?
6	Soils	The development sites identified in SP23 are all greenfield sites, given that there is limited opportunity for development on previously developed land, meaning the bulk of development will take place on greenfield land, resulting in soil sealing. Some of the area proposed for development in the strategy includes Grade 2 agricultural	P	L	✗	✗	✗

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
		land. This will need to be taken into account in the planning of new developments in order to ensure that loss of Grade 2 soils is minimised.					
7	Resource efficiency	SP24 and SP25 require delivery of an exemplar in sustainable living with a particular focus on reducing energy consumption as well as generating energy from renewable and low carbon sources, thereby supporting this objective.	P	L	✓	✓	✓
8	Historic Environment	Delivering the growth proposed in SP23 could have adverse effects on the historic environment, these effects being specific to the heritage assets and their settings associated with individual development sites though none of the sites in Tring proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on the historic environment.	-	-	?	?	?
9	Landscape/ Townscape	Development would extend Tring into open countryside and potentially affect the setting of the Chilterns AONB to which some of the new developments would be adjacent. However, the spatial strategy acknowledges the need for careful design and significant open space to protect the immediate landscape setting and character. Provision of green spaces at new developments including delivery of SANGs, if required, could bring local landscape benefits.	P	L	x	x	x
10	Health and Wellbeing	SP23 indicates that the majority of Tring's proposed urban expansions would include new public open space which would help to address the current deficiency in the town and support this objective, as would the requirements of both SP24 and SP25 to deliver a comprehensive green infrastructure network. In addition, the provision of green infrastructure and plans to provide walkable neighbourhoods may encourage the adoption of active travel to access facilities and services, as would the delivery of integrated and accessible developments with walking, cycling and public transport prioritised, these being requirement of SP24 and SP25.	P	L	✓	✓	✓
11	Sustainable Locations	Given the lack of available sites to deliver new development within the town boundary, the proposed locations for large new developments offer the next most sustainable locations to deliver the housing and employment growth. The implementation of the measures in the Berkhamsted and Tring Transport Strategy should help to ensure that services and facilities are accessible by sustainable modes of transport.	P	L	✓	✓	✓
12	Community cohesion	Strategic sites proposed for Tring include provision for new primary schools, a secondary school, and a neighbourhood centre/ community hub. Developments that promote the vitality and vibrancy of the local centre, including the proposals associated with the 'Tr06 - High Street / Brook Street' growth area, would have positive effects against this objective.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
13	Housing	SP23 supports the development of 2,730 new dwellings over the plan period in Tring.	P	L	✓✓	✓✓	✓✓
14	Sustainable prosperity	Provision of a new General Employment Area in the town would contribute towards providing economic growth to the town. In addition, the provision of 2,730 new homes would help to support the viability and vitality of Tring's local economy. Maintaining the shopping and service role of Tring Town Centre would help to maintain the local economy. Enabling appropriate new development at Brook Street and Icknield Way would be beneficial to the local economy and could generate new employment opportunities.	P	L	✓✓	✓✓	✓✓
15	Employment and skills	Provision of a new General Employment Area in the town would contribute towards providing new employment opportunities for the town. In addition, enabling appropriate new development at Brook Street and Icknield Way would be beneficial to the local economy and could generate new employment opportunities. The masterplan includes provision for new primary and secondary schools which supports this objective.	P	L	✓✓	✓✓	✓✓
Mitigation within the plan:		See mitigation identified for Policy SP2. NB: additional mitigation will need to be considered in relation to the potential sealing of Grade 2 soils (see SA6 above), for example through utilising more of the Grade 2 land to deliver open space provision, thereby reducing the amount of land lost to development.					

SP26 – Delivering Growth in Kings Langley

This assessment considers the effects of the Kings Langley Delivery Strategy and does not consider the generic effects that additional housing would generate, which are covered in the assessment for Policy SP4. The effects associated with specific Kings Langley site allocations are considered under the assessments for the ‘Proposals and Sites’ section of the Draft Local Plan. These site assessments can be found in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	There is limited opportunity for development on previously developed land and the bulk of planned growth would be met through urban extension on greenfield land which has some biodiversity value. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though neither of the sites in Kings Langley proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity	-	-	?	?	?
2	Water	The spatial strategy acknowledges that the frontage to the Grand Union Canal would need to be carefully managed. Therefore, this could have a positive impact on water quality.	P	L	✓	✓	✓
3	Flood risk	New development near to the river/canal could be at risk from flooding.	-	-	?	?	?
4	Climate Change	Additional homes in Kings Langley may somewhat exacerbate congestion issues at the M25 junction 20/A41 junction, though the overall impact would be minimal given the level of growth proposed in the area. Improvements to infrastructure along the canal may encourage active travel, though the level of impact on this objective is dependent on the level of behavioural change that would be required to make use of the active travel modes enabled by this policy.	-	-	?	?	?
5	Air Quality	Additional homes in Kings Langley may exacerbate air quality issues in the two AQMAs in Hemel Hempstead at London Road and Lawns Lane. It may also somewhat exacerbate congestion issues at the M25 junction 20/A41 junction, thereby worsening air quality at that location, though the overall impact would be minimal given the level of growth proposed in the area. Improvements to infrastructure along the canal may encourage active travel, though the level of impact on this objective is dependent on the level of behavioural change that would be required to make use of the active travel modes enabled by this policy.	-	-	?	?	?
6	Soils	The sites identified in SP26 are greenfield sites, given that there is limited opportunity for development on previously developed land, meaning development will result in soil sealing.	P	L	x	x	x

SA Objective		Assessment of Effect						
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects			
					In short term	In medium term	In long term	
7	Resource efficiency	No strategy specific predicted effects.	-	-	-	-	-	
8	Historic Environment	No strategy specific predicted effects.	-	-	-	-	-	
9	Landscape/ Townscape	Extension of the village into open countryside is likely to have some adverse effects on local landscapes. However, the spatial strategy requires that the northern edge of the Rectory Farm development maintains a soft edge to the village and limits coalescence with Hemel Hempstead.	P	L	x	x	x	
10	Health and Wellbeing	'Growth area' housing site proposals would be required to provide public open space, thereby supporting this objective. In addition any new green space provision and improvements to infrastructure could be provided along the canal which may encourage active travel and outdoor recreation.	P	L	✓	✓	✓	
11	Sustainable Locations	The renewal/regeneration of the High Street which is supported by SP26 would mean residents would have improved access to facilities and services and the need to travel would be reduced.	P	L	✓	✓	✓	
12	Community cohesion	Community services in the village would be maintained and expanded and a new local centre would be provided. Developments that promote the vitality and vibrancy of the local centre would have positive effects against this objective.	P	L	✓	✓	✓	
13	Housing	The delivery of around 275 new homes would help to provide a mix of dwellings to meet local needs, including the need for affordable housing. A new care home complex in the village would help meet the needs of the elderly population.	P	L	✓	✓	✓	
14	Sustainable prosperity	The provision of new homes would help to support the viability and vitality of Kings Langley's local economy. Maintaining the shopping and service role of the village centre would help to maintain the local economy. Safeguarding of a new employment area in the village at Sunderland Yard as well as enabling appropriate new development at Kings Langley High Street would be beneficial to the local economy and would generate new employment opportunities.	P	L	✓	✓	✓	
15	Employment and skills	Safeguarding of a new employment area in the village at Sunderland Yard as well as enabling appropriate new development at Kings Langley High Street would be beneficial to the local economy and would generate new employment opportunities.	P	L	✓	✓	✓	
Mitigation within the plan:		See mitigation identified for Policy SP2.						

SA Objective	Assessment of Effect					
	Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
				In short term	In medium term	In long term
	In addition to that, DM34 – Flood Risk and Protection and its accompanying mitigation measures should ensure that flood risk in Kings Langley is not increased and that built development is located in areas at lowest risk of flooding.					

SP27 – Delivering Growth in Bovingdon

This assessment considers the effects of the Bovingdon Delivery Strategy and does not consider the generic effects that additional housing would generate, which are covered in the assessment for Policy SP4. The effects associated with specific Bovingdon site allocations are considered under the assessments for the ‘Proposals and Sites’ section of the Draft Local Plan. These site assessments can be found in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	There is limited opportunity for development on previously developed land and the bulk of planned growth would be met through extension of the village on greenfield land which has some biodiversity value. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though neither of the sites in Bovingdon proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity.	-	-	?	?	?
2	Water	No strategy specific predicted effects.	-	-	-	-	-
3	Flood risk	No strategy specific predicted effects.	-	-	-	-	-
4	Climate Change	No strategy specific predicted effects.	-	-	-	-	-
5	Air Quality	No strategy specific predicted effects.	-	-	-	-	-
6	Soils	The bulk of planned growth for Bovingdon would be met through extension of the village on greenfield land, with associated soil loss and sealing. Some of the area proposed for development in the strategy includes Grade 2 agricultural land. This will need to be taken into account in the planning of new developments in order to ensure that loss of Grade 2 soils is minimised.	P	L	x	x	x
7	Resource efficiency	No strategy specific predicted effects.	-	-	-	-	-
8	Historic Environment	No strategy specific predicted effects.	-	-	-	-	-
9	Landscape/ Townscape	Development of new housing on the edge of the village, particularly to the west in a prominent location, could have adverse effects on local landscapes.	P	L	x	x	x
10	Health and Wellbeing	The ‘growth area’ housing site proposals would be required to provide new public open space, thereby supporting this objective.	P	L	✓	✓	✓

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
11	Sustainable Locations	The renewal/regeneration of the High Street which is supported by SP27 would mean residents would have improved access to facilities and services and the need to travel would be reduced.	P	L	✓	✓	✓
12	Community cohesion	The council's proposal to create new community facilities, green space and a play area for the village would support this objective. The proposed safeguarding of an area of the Grange Farm site for future education use would enable future development of a new, replacement primary school.	P	L	✓	✓	✓
13	Housing	The delivery of around 240 new homes would help to provide a mix of dwellings to meet local needs, including the need for affordable housing.	P	L	✓	✓	✓
14	Sustainable prosperity	The provision of new homes would help to support the viability and vitality of Bovingdon's local economy. Maintaining the shopping and service role of the village centre would help to maintain the local economy. Safeguarding of the existing employment areas at HMP The Mount and the former Bovingdon Brickworks as well as enabling appropriate new development at Bovingdon High Street would be beneficial to the local economy and would generate new employment opportunities.	P	L	✓	✓	✓
15	Employment and skills	Safeguarding of the existing employment areas at HMP The Mount and the former Bovingdon Brickworks as well as enabling appropriate new development at Bovingdon High Street would be beneficial to the local economy and would generate new employment opportunities. The provision of a new 3FE school would support this objective.	P	L	✓	✓	✓
Mitigation within the plan:		See mitigation identified for Policy SP2. NB: additional mitigation will need to be considered in relation to the potential sealing of Grade 2 soils (see SA6 above), for example through utilising more of the Grade 2 land to deliver open space provision, thereby reducing the amount of land lost to development.					

SP28 – Delivering Growth in Markyate

This assessment considers the effects of the Markyate Delivery Strategy and does not consider the generic effects that additional housing would generate, which are covered in the assessment for Policy SP4. The effects associated with specific Markyate site allocations are considered under the assessments for the ‘Proposals and Sites’ section of the Draft Local Plan. These site assessments can be found in Appendix E.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	There is limited opportunity for development on previously developed land and the bulk of planned growth would be met through extension of the village on greenfield land which has some biodiversity value. The type and significance of the effects will be dependent on the biodiversity of the sites to be developed, though none of the sites in Markyate proposed to be included in the Local Plan have been predicted to result in significant positive or negative impacts on biodiversity.	-	-	?	?	?
2	Water	New development could have adverse effects on the River Ver, including during construction phase.	-	-	?	?	?
3	Flood risk	New development could increase flood risk associated with the River Ver.	-	-	?	?	?
4	Climate Change	The spatial strategy notes that there is limited potential for infrastructure improvements that would enable active travel, or improvements to bus services. This may increase reliance on the car which would increase greenhouse gas emissions.	-	-	?	?	?
5	Air Quality	The spatial strategy notes that there is limited potential for infrastructure improvements that would enable active travel, or improvements to bus services. This may increase reliance on the car which would increase airborne emissions.	-	-	?	?	?
6	Soils	The largest site identified in SP28 is a greenfield site and given that there is limited opportunity for development on previously developed land the bulk of development will take place on greenfield land, resulting in soil sealing.	P	L	x	x	x
7	Resource efficiency	No strategy specific predicted effects.	-	-	-	-	-
8	Historic Environment	No strategy specific predicted effects.	-	-	-	-	-
9	Landscape/ Townscape	Development would extend Markyate into open countryside and potentially affect the setting of the AONB, though the spatial strategy acknowledges the need for careful design to protect the immediate landscape setting and character.	P	L	x	x	x

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
10	Health and Wellbeing	The spatial strategy includes the provision of new green space and recreational space, though notes that the provision of infrastructure for active travel may be limited.	P	L	?	?	?
11	Sustainable Locations	Enabling appropriate new development at Markyate High Street would mean residents would have access to improved facilities and services and the need to travel would be reduced.	P	L	✓	✓	✓
12	Community cohesion	The spatial strategy supports the growth of Markyate which would support and stabilise the vibrancy and vitality of the village centre, supporting this objective.	P	L	✓	✓	✓
13	Housing	The delivery of around 215 new homes would help to provide a mix of dwellings to meet local needs, including the need for affordable housing. The spatial strategy notes that there is potential for the provision of a new care home in the village which would support the housing needs of the elderly.	P	L	✓	✓	✓
14	Sustainable prosperity	The provision of new homes would help to support the viability and vitality of Markyate's local economy. Markyate includes a designated employment area and the spatial strategy includes the retention of some of this land. Maintaining the shopping and service role of the village centre and the provision of additional commercial units would help to maintain the local economy.	P	L	✓	✓	✓
15	Employment and skills	Safeguarding the employment land at Sharose Court and the provision of commercial units on Hicks Road would be beneficial to the local economy and would generate new employment opportunities.	P	L	✓	✓	✓
Mitigation within the plan:		See mitigation identified for Policy SP2. In addition to that mitigation, DM34 – Flood Risk and Protection and its accompanying mitigation measures should ensure that flood risk in Markyate is not increased and that built development is located in areas at lowest risk of flooding.					

SP29 – Delivering Growth in the Countryside

This assessment considers the generic effects associated with the Countryside Delivery Strategy and not any site-specific effects associated with the individual Growth Areas identified in Policy SP29. The site-specific effects are included in Appendix E of this report in the section covering Countryside Proposals and Sites.

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
1	Biodiversity	Effects on biodiversity will be dependent on the biodiversity value of individual development sites. Where development takes place on greenfield sites there could be loss of biodiversity, although it should be recognised that previously developed sites can have biodiversity value, which needs to be taken into account.	-	-	?	?	?
2	Water	Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?
3	Flood risk	Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?
4	Climate Change	By restricting the level of development in the Countryside the strategy would help to reduce the overall Borough-wide need to travel and distances to travel to access services and facilities	P	L	✓	✓	✓
		Additional traffic/journeys would be associated with the Growth Area developments thereby resulting in increased GHG emissions.	P	N	x	x	x
5	Air Quality	No predicted effects.	-	-	-	-	-
6	Soils	Any development on greenfield sites in the Countryside would result in soil sealing and the degradation/loss of soils. However, by restricting levels of development in the Countryside the policies would minimise the negative effects against this objective.	P	L	x	x	x
7	Resource efficiency	No predicted effects.	-	-	-	-	-
8	Historic Environment	By restricting development in the Countryside the strategy would help to conserve the historic nature of the Borough's smaller settlements.	P	L	✓	✓	✓
		Effects on the historic environment would be dependent on the specific heritage assets associated with sites for new developments.	-	-	?	?	?
9	Landscape/ Townscape	The strategy constrains the level of development that can occur in the Countryside which would help to protect local landscapes.	P	L	✓	✓	✓
		Developments in the Countryside could have adverse effects on the local landscape. Effects will be dependent on the type of development and the characteristics of the specific locations.	-	-	?	?	?

SA Objective		Assessment of Effect					
		Nature of Effect Including where appropriate whether the effects are direct/indirect and likely/unlikely. Justification and Evidence	Permanence	Scale	Significance of Effects		
					In short term	In medium term	In long term
10	Health and Wellbeing	The strategy supports the provision of replacement sports facilities. Effects against this objective will be dependent on the whether the new facilities provide increased, decreased or the same level of provision and also on whether there are changes in the level of access to facilities by different user groups.	-	-	?	?	?
11	Sustainable Locations	By restricting the level of development in the Countryside the strategy supports the objective to develop in the most sustainable locations.	P	L	✓	✓	✓
12	Community cohesion	The strategy allows some limited new development in the smaller settlements which would help to support the viability of existing facilities.	P	L	✓	✓	✓
13	Housing	The strategy would allow the development of small-scale housing developments which would help towards meeting specific local needs.	P	L	✓	✓	✓
14	Sustainable prosperity	Enabling some additional employment development in the Countryside would help to support the local economy. Allowing some limited new housing in the smaller settlements would help to support the local economy of those areas.	P	L	✓	✓	✓
15	Employment and skills	Enabling some additional employment development in the Countryside would help with the provision of additional employment opportunities within the Borough. Allowing some limited new housing in the smaller settlements would help to support the local economy of those areas and help with job retention and creation.	P	L	✓	✓	✓
Mitigation within the plan:		See mitigation identified for Policy SP2. In addition to that mitigation, DM34 – Flood Risk and Protection and its accompanying mitigation measures should ensure that flood risk is not increased and that built development is located in areas at lowest risk of flooding.					

Appendix E Assessments of Draft Local Plan Proposals and Sites

Each of the sites that have been included in the Schedule of Site Appraisals has been assessed against the objectives in the SA Framework (see Appendix A).

For each site an assessment has been undertaken, with each 'Site versus SA objective' relationship being 'scored' using the significance criteria shown below. The assessment scoring is supported by an assessment commentary to provide the rationale behind the score allocated.

Significance Assessment	Description
✓✓	The option is likely to have a significant positive effect
✓	The option is likely to have a positive effect which is not significant
?	Uncertain – It is uncertain how or if the option impacts on the SA/SEA objective
–	Neutral – The option is unlikely to impact on the SA/SEA objective
✘	The option is likely to have a negative effect which is not significant
✘✘	The option is likely to have a significant negative effect

E.1 Hemel Hempstead Sites

Site Reference: North Hemel Hempstead, Hemel Hempstead

SA Objective		North Hemel Hempstead	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site also includes Varney's Wood wildlife site and is adjacent to Thrift Wood wildlife site, both of which contain ancient woodland, which could be affected by development. Large scale development could give rise to possible adverse effects on Chiltern Beechwood SAC. Suitable alternative natural greenspace may need to be required to offset such effects.	x
		Development at this large site would provide the opportunity to include a Suitable Alternative Natural Greenspace (SANG) area which could deliver local biodiversity enhancements as well as providing the potential to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at Ashridge Estate.	✓
2	Water	Upgrades to the network are likely to be required to manage additional capacity for water and wastewater.	?
3	Flood risk	This site is in a low risk flood zone and not in flood risk zone 2 or 3. There are at least two large flow routes through the site which are likely to be associated with small watercourses but the site is at low risk of flooding from all sources.	-
4	Climate change	The potential scale of development would require the provision of a range of facilities and services (e.g. schools, shops, healthcare facilities) thereby reducing the need to travel for many day to day needs. This would help reduce the growth in greenhouse gas emissions that would inevitably result from any new development. In addition, the development will be likely to deliver additional public transport services which could be used by new and existing residents of the area and help to reduce car use. The development could also improve bus patronage for existing services and support their viability. The development would be large enough for district heating opportunities to be explored.	✓
		This site is located some distance from the town centre which could result in increased car use and growth in the level of greenhouse gas emissions.	x
5	Air Quality	This site is located a distance from the town centre which might discourage walking and cycling, so there could be an increased use of the car which would increase levels of airborne emissions. However, the provision of services and facilities with the new development will reduce the need to travel and there could be beneficial implications for air quality depending on the uptake of this mode and the provision of services in the local centre being adequate for the needs of the local community. In addition, the development will be likely to deliver additional public transport services which could be used by new and existing residents of the area and help to reduce car use. The development could also improve bus patronage for existing services and support their viability. The site has the potential to provide a new link route to connect the Leighton Buzzard Road with Redbourn Road. It is uncertain how this will affect local air quality, but if it relieves congestion or supports a move toward more sustainable modes of transport it could result in improvements.	?

SA Objective		North Hemel Hempstead	
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site contains four Listed Buildings (Barn at Little Lovetts End Farm; Eastbrook Hay Farmhouse and Barn; Barn at Holtsmere End Farm; and Holtsmere Manor) which may have their settings affected by new development. The western edge of the site adjoins the Piccott's End Conservation Area and an Area of Archaeological Significance ('Late medieval settlement of Piccott's End'). The effects of new development on these assets is uncertain.	x
9	Landscape Townscape /	The northern boundary of the site is adjacent to the Chilterns AONB and development could affect the setting of the AONB. The site is within the High Gade Valley and Gaddesdon Row character areas. Development of the site would extend Hemel Hempstead into this prominent area of countryside and close the gap with Piccotts End. The site has moderate-high susceptibility to landscape change ¹⁷⁴ .	x
		Development at this location could provide a new country park for the town which would provide a buffer between the development and the Chilterns AONB and would improve access to the countryside.	✓
10	Health and wellbeing	Development at this location could provide a new country park for the town which would provide opportunities for recreation contributing towards healthy lifestyles. In addition, the provision of new healthcare facilities will help to improve everyone's access to healthcare.	✓
		The site is located at a distance from the town centre, which could discourage walking and cycling.	x
11	Sustainable locations	The site is located at a distance from the town centre; however there are a number of local centres/community hubs planned as part of the development which will meet some day to day needs and help reduce the need to travel. In addition the development could provide a new bus loop which could be used by new and existing residents and provide opportunities to avoid car use. The development could also improve bus patronage for existing services and support their viability.	✓
12	Community cohesion	The site is located at a distance from the town centre; however a local centre is planned which would provide new infrastructure (e.g. primary and secondary schools and healthcare facilities) which will meet some day to day needs as well as taking pressure off existing local services and infrastructure	✓

¹⁷⁴ Arup, 2020, *Dacorum Borough Landscape Sensitivity Study*

SA Objective		North Hemel Hempstead	
		By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	
13	Housing	Development of this site would provide a very large amount of new housing. Significant positive effects against this objective have therefore been predicted.	✓✓
14	Sustainable prosperity	As this site should provide a large amount of additional housing, this increased number of residents in the town would make facilities and shops more viable.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services. The site also includes a number of local centres/community hubs which could offer employment opportunities.	✓

Site Reference: Station Gateway, London Road, Hemel Hempstead

SA Objective		Station Gateway	
1	Biodiversity	The site is close to 'Harrison's Moor, Boxmoor Common' wildlife site.	?
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	Though the site is a distance from the town centre which may mean residents have to travel to access facilities, the site includes the mainline railway station serving Hemel Hempstead and has high quality access to public transport connecting to the town centre, employment area and other settlements, which could reduce the reliance on cars and therefore reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	Though the site is a distance from the town centre which may mean residents have to travel to access facilities, the site includes the mainline railway station serving Hemel Hempstead and has high quality access to public transport connecting to the town centre, employment area and other settlements, which could reduce the reliance on cars and therefore reduce the growth in airborne emissions.	✓
		The site is located approx. 0.8km from the London Road AQMA; the development could generate additional traffic in the AQMA.	x
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	The western part of the site is in " <i>Roman villa & cemetery, Boxmoor; Roman building adjacent to station</i> " Area of Archaeological Significance and the site is close to Box Moor which is of local value as a heritage asset.. As a result effects against this objective are uncertain.	?
9	Landscape / Townscape	Development at this site could affect the semi-rural character of Boxmoor, and the adjoining residential area. The layout, scale, height and density of the development will need to take this into account.	?
10	Health and wellbeing	The site is adjacent to Boxmoor Common designated public open space which could be used for recreation and offers active travel routes to the town centre.	✓
		Potential noise from the railway line could adversely affect the wellbeing of the new residents and would need to be mitigated.	?
11	Sustainable locations	The site is located at a distance from the town centre and local centre at Apsley, however it includes the mainline railway station and other public transport links. The development will include additional services including local shops and facilities which would reduce the need to travel. A significant positive effect has been identified.	✓✓

SA Objective		Station Gateway	
12	Community cohesion	By providing additional housing and new facilities, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide c.300 dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	The provision of a new hotel, cafes and restaurants, along with the potential for office space would provide good employment opportunities and support the local economy. Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Frogmore Road, Hemel Hempstead

SA Objective		Frogmore Road	
1	Biodiversity	The northern boundary of the site is adjacent to a Local Wildlife Site and there are TPOs in place along the site boundary.	?
2	Water	The site is located along the Grand Union Canal and the River Bulbourne. Development may affect these watercourses.	?
3	Flood risk	Parts of the site are within Flood Zone 2 and a small area is within Flood Zone 3b. The site is surrounded on three sides by the Grand Union Canal and River Bulbourne. The site is at high risk of surface water flooding.	?
4	Climate change	The site is close to Apsley local centre and has good access to public transport which could decrease the need to travel by car and reduce the level of growth in greenhouse gas emissions. Maintaining and enhancing the footpath link across the site to the canal footbridge could also help to support this objective.	✓
5	Air Quality	The site is close to Apsley local centre and has good access to public transport which could decrease the need to travel by car and reduce growth in airborne emissions. Maintaining and enhancing the footpath link across the site to the canal footbridge could also help to support this objective.	✓
		The site is located close to both the Lawn Lane and London Road AQMAs; the development could generate additional traffic in the AQMAs.	✗
6	Soils	The site is currently used for employment and may require remediation which would improve soil quality.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Building design and layout is required to respect the canal frontage and therefore this could improve the townscape within the area, particularly along the watercourse. Planting along the canal should also support this objective. Provision of housing at this site could support the vibrancy of Apsley local centre.	✓
10	Health and wellbeing	Maintaining and enhancing the footpath link across the site to the canal footbridge supports this objective. There is a potential opportunity to improve the quality of the footpath alongside the canal.	✓
11	Sustainable locations	The site is within a main settlement, close to Apsley local centre. A significant positive effect has been identified.	✓✓
12	Community cohesion	No predicted effects	-
13	Housing	The proposal would provide 170 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of employment land	✗
		The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Development of this site will result in the loss of employment land and opportunities.	✗

Site Reference: Hospital Site, Hillfield Road, Hemel Hempstead

SA Objective		Hospital Site, Hillfield Road	
1	Biodiversity	The site is adjacent to a wildlife site (Paradise Fields Central) and contains TPOs. Increased use of the site by the new residents could adversely affect the adjacent wildlife site and therefore effects on biodiversity are uncertain.	?
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	The site's location close to the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location close to the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in airborne emissions.	✓
6	Soils	A proportion of the site is made up of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Re-developing the old hospital could improve the townscape in the locality.	✓
10	Health and wellbeing	Replacing the old hospital supports this objective. The site is adjacent to public open space (a wildlife) which may be used for recreation. The site's location close to the town centre and other employment areas could allow local people to live near to their work.	✓
11	Sustainable locations	The site is located within a main settlement, close to the town centre and to key services. Development of this mixed use site would provide for replacement local hospital facilities, and a new primary school. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	This proposal allows for 450 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Large areas of the existing hospital site are now closed/not in use. The reconfiguring of the existing hospital to meet future needs will likely result in the retention of existing levels of employment alongside some new employment opportunities as a result of the delivery of a new primary school. The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓

Site Reference: Two Waters North, Hemel Hempstead

SA Objective		Two Waters North	
1	Biodiversity	The site is adjacent to the Boxmoor Common wildlife site.	?
2	Water	The site is close to the River Gade and development could affect this watercourse	?
3	Flood risk	Parts of the site are within flood zone 2 and there is a high risk of surface water flooding. A flood risk assessment would be required.	✘
4	Climate change	The site's location in the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions. However, the Plough Roundabout could be a barrier to pedestrian movement into the town centre.	✓
5	Air Quality	The site's location in/adjacent to the town centre could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions. However, the Plough Roundabout could be a barrier to pedestrian movement into the town centre.	✓
6	Soils	The site is made up of previously developed land. Part of the site is contaminated land and therefore would require remediation which would improve soil quality.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is adjacent to five listed buildings at Corner Hall. Development may affect the settings of these. The site is in close proximity to Box Moor, which is of local value as a heritage asset..	?
9	Landscape / Townscape	Development of this site has the potential to improve the townscape.	✓
10	Health and wellbeing	The site's location in close proximity the town centre could encourage use of active modes of travel to access facilities. However, the Plough Roundabout could be a barrier to pedestrian movement into the town centre. The site is adjacent to public open space which would be easily accessible to users/residents of this site.	✓
11	Sustainable locations	The site is located in close proximity to Hemel Hempstead town centre. The site's location in close proximity to the town centre could allow local people to live near to their work. There is also potential for the site to deliver employment generating uses at ground floor level, such as offices and food and drink establishments. A significant positive effect has been identified.	✓✓
12	Community cohesion	The site has the potential to deliver some employment opportunities in the form of office or small scale retail units at the ground floor level. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The proposal allows for 350 new dwellings.	✓

SA Objective		Two Waters North	
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Development of this site would result in the small loss of employment land close to the town centre, however there is potential to offset this with new employment generating uses at ground floor level, such as new offices and food and drink establishments.	?

Two Waters South (Two Waters/ London Road Junction), Hemel Hempstead

SA Objective		Two Waters South (Two Waters / London Road Junction)	
1	Biodiversity	The site is within the Boxmoor Common wildlife site.	x
		The development of the site would allow the Trust to obtain considerably more land in more suitable locations on the edge of Hemel which are predicted to deliver biodiversity gains.	✓
2	Water	The site is close to the River Gade and development could affect this watercourse	?
3	Flood risk	The site is not in Flood Zones 2 and 3. There is a small area which is at a higher risk of surface water flooding	?
4	Climate change	The site's location in close proximity to the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location in the town centre could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is within Box Moor which is of local value as a heritage asset.	x
9	Landscape / Townscape	The site is located at a town centre gateway and therefore design would need to take this into account. Provision of housing at this site could support the vibrancy of Hemel Hempstead Town Centre.	?
10	Health and wellbeing	The site's location in close proximity the town centre could encourage use of active modes of travel to access facilities. The site is adjacent to public open space which would be easily accessible to users/residents of this site.	✓
11	Sustainable locations	The site is located in close proximity to the town centre of a main settlement. The site's location in close proximity to the town centre could allow local people to live near to their work. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The proposal allows for 60 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Market Square and Bus Station, Marlowes / Waterhouse Street, Hemel Hempstead

SA Objective		Market Square and Bus Station, Marlowes/Waterhouse	
1	Biodiversity	No predicted effects.	-
2	Water	Development at this site close to the River Gade may have an adverse effect on its water quality.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. There is a small area which is at a higher risk of surface water flooding.	?
4	Climate change	The site's location in the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location in the town centre could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions.	✓
6	Soils	The site is made up of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is located close to the Water Gardens Registered Park and Garden and therefore its development could affect this designation. Careful design will be needed to mitigate any adverse effects.	?
9	Landscape / Townscape	Development of this site has the potential to improve the townscape.	✓
10	Health and wellbeing	The site's location in the town centre could encourage use active modes of travel to access facilities. Site is adjacent to the Water Gardens and in close proximity to other areas of public open space (Gadebridge Park) which would be easily accessible to users/residents of this site.	✓
11	Sustainable locations	The site's location in the town centre allows easy access to amenities. The site is expected to deliver additional town centre uses at ground floor level, further enhancing the sustainability of the site.	✓✓
12	Community cohesion	There would be a loss of an area of public open space in the town centre. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	?
13	Housing	This proposal would allow for c.130 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy. The site is also expected to deliver employment generating town centre uses at ground floor level.	✓
15	Employment and skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention. The site is also expected to deliver employment generating town centre uses at ground floor level.	✓

Site Reference: NCP Car Park, Hemel Hempstead

SA Objective		NCP Car Park	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site's location in the town centre could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location in the town centre could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	The site is located close to the Water Gardens Registered Park and Garden and therefore its development could affect this designation. Careful design will be needed to mitigate any adverse effects. The site is also close to a number of Grade II Listed Buildings.	?
9	Landscape / Townscape	Development of this site has the potential to improve the townscape.	✓
10	Health and wellbeing	The site's location in the town centre could encourage use active modes of travel to access facilities.	✓
11	Sustainable locations	The site is located within a main settlement, close to the town centre with access to local amenities. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	This proposal would allow for 50 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Development of this site would result in the small loss of employment land close to the town centre.	✗
		There is potential to offset the loss of employment land with new employment generating town centre uses at ground floor level. Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Paradise /Wood Lane, Hemel Hempstead

SA Objective		Hemel Hempstead Paradise/ Wood Lane	
1	Biodiversity	This site is adjacent to a wildlife site (Paradise Fields Central) and there are TPOs in place along the site's northern boundary.	?
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site's location close to the town centre could decrease the need to travel to access facilities. This could lead to beneficial effects in terms of reducing the growth of greenhouse gas emissions.	✓
5	Air Quality	The site's location close to the town centre could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this site has the potential to improve the townscape.	✓
10	Health and wellbeing	The site's location close to the town centre could encourage the use of active modes of travel to access facilities. The site is also adjacent to open space (a wildlife site) which may be used for recreation.	✓
11	Sustainable locations	The site is located within a main settlement, close to the town centre and other key services such as the hospital. The site's location close to the town centre and the other local facilities, such as the hospital, should allow for easy access to facilities. A significant positive effect has been identified.	✓✓
12	Community cohesion	The site has the potential to deliver some employment opportunities in the form of office or small scale retail units at the ground floor level. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would deliver c.350 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
		There is potential for the site to deliver employment generating uses at ground floor level, such as offices and food and drink establishments, though this is unlikely to compensate for the loss of existing floorspace.	?

SA Objective		Hemel Hempstead Paradise/ Wood Lane	
15	Employment and skills	<p>Development of this site will result in the loss of employment land and opportunities though there is potential to offset some of this with employment generating uses (including offices) at ground floor level. This is unlikely to compensate for the loss of existing floorspace</p> <p>Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.</p>	?

Site Reference: Wood Lane End, Hemel Hempstead

SA Objective		Wood Lane End	
1	Biodiversity	No predicted effects.	?
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is close to Maylands local centre and has good access to public transport which could decrease the need to travel by car and reduce the level of growth in greenhouse gas emissions.	✓
5	Air Quality	The site is close to Maylands local centre and has good access to public transport which could decrease the need to travel by car and reduce growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is within an Area of Archaeological Significance. The effects of new development on these assets is uncertain.	?
9	Landscape / Townscape	Regenerating this employment area could improve the local townscape.	✓
10	Health and wellbeing	The site is close to local services and employment opportunities which could encourage active travel such as walking and cycling.	✓
11	Sustainable locations	The site is within a main settlement. It is close to some local facilities, including employment. Provision of housing at this site could support the vibrancy of the local area. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would deliver 150 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of employment land and opportunities in this location.	✗
		Provision of housing at this site could help the local economy and encourage provision of local services.	✓
15	Employment and skills	Development of this site will result in the loss of employment land and opportunities in this location.	✗
		Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: National Grid Land, Hemel Hempstead

SA Objective		National Grid Land	
1	Biodiversity	The site is close to 'Harrison's Moor, Boxmoor Common' wildlife site and there are TPOs located on the southern boundary of the site.	?
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is within close proximity to Hemel Hempstead train station. It is also in reasonable proximity to amenities within Hemel Hempstead town centre and Apsley local centre. Use of sustainable modes of travel could therefore be encouraged which could reduce the level of growth in greenhouse gas emissions.	✓
5	Air Quality	The site is within close proximity to Hemel Hempstead train station. It is also fairly close to amenities within Hemel Hempstead town centre and Apsley local centre. Use of sustainable models of travel could therefore be encouraged which could reduce the level of growth in airborne emissions.	✓
		However, the London Road Apsley AQMA could be affected by development of this site which lies to the north-west and which could generate additional traffic in the AQMA.	?
6	Soils	The site contains contaminated land and therefore would require remediation which would improve soil quality.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is adjacent to the Box Moor which is of local value as a heritage asset.	?
9	Landscape / Townscape	Townscape could be improved due to the removal of the gas holders, though some necessary infrastructure is likely to remain on a small portion of the site.	✓
10	Health and wellbeing	The existing footpath on the site is to be maintained and enhanced. The sites location near to local amenities and the town centre, as well as planned improvements to local cycle ways could encourage walking and cycling.	✓
		The site is close to the railway line which could result in noise levels affecting health and well-being.	?
11	Sustainable locations	The site is within close proximity to Hemel Hempstead train station. It is also fairly close to amenities within Hemel Hempstead town centre and Apsley local centre. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The proposal allows for c.400 new dwellings.	✓

SA Objective		National Grid Land	
14	Sustainable prosperity	Part of the site is within the Two Waters General Employment Area, which would be lost, along with associated employment opportunities, though it is recognised that much of the site is currently not in active employment use.	x
		Provision of housing at this site should help the local economy and encourage provision of local services.	✓
15	Employment and skills	Part of the site is within the Two Waters General Employment Area, which would be lost, along with associated employment opportunities though is recognised that much of the site is currently not in active employment use. Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	x

Site Reference: Marchmont Farm, Hemel Hempstead

SA Objective		Marchmont Farm (LA1)	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. There are TPOs in place within the site and the site is adjacent to Howe Grove Nature Reserve and Wildlife Site.	?
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located close to local shops and facilities. Use of sustainable modes of travel could therefore be encouraged which would reduce the level of growth in greenhouse gas emissions.	✓
5	Air Quality	This site is located close to local shops and facilities. Use of sustainable modes of travel could therefore be encouraged which would reduce the level of growth in airborne emissions.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of the site would extend Hemel Hempstead into open countryside and erode the gap with Piccotts End. The site could have a visual impact on the Gade Valley and Piccotts End.	x
10	Health and wellbeing	The site is located close to local facilities, which could encourage walking and cycling. However, access to the public rights of way which cross the site may be disrupted.	✓
11	Sustainable locations	The site is located close to local facilities and amenities. Development at this edge of town location does not support the objective to focus new development in the centre of urban areas. However, it should support the nearby local centres.	✓
12	Community cohesion	The site is located near local facilities and amenities. The proposal will also deliver an extension to Margaret Lloyd Park and provide locally equipped area of play (LEAP).	✓
13	Housing	The site would provide 385 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Old Town, Hemel Hempstead

SA Objective		Old Town, Hemel Hempstead	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site is close to Howe Grove Wildlife Site and Nature Reserve.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located close to local shops and facilities. Use of sustainable modes of travel could therefore be encouraged which would reduce the level of growth in greenhouse gas emissions. However, walking and cycling may be discouraged by the topography of the area.	✓
5	Air Quality	This site is located close to local shops and facilities. Use of sustainable modes of travel could therefore be encouraged which would reduce the level of growth in airborne emissions. However, walking and cycling may be discouraged by the topography of the area.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is located adjacent to the Old Town Conservation Area, (a very small part is within the CA), and development may have an impact on its setting and that of the nearby Gadebridge Park which is of local value as a heritage asset. The site is also adjacent to an Area of Archaeological Significance “Medieval settlement of Hemel Hempstead” and a Grade II Listed Building.	?
9	Landscape / Townscape	Development of the site could impact on the unspoilt valley landscape and its interface with the Old Town	x
10	Health and wellbeing	The site is located near local facilities and amenities, which could encourage walking and cycling, although the topography of the area may discourage use of these modes. Access to the public right of way which runs along the site boundary may be affected.	✓
11	Sustainable locations	The site is located near local facilities and amenities. Development at this location close to the town centre supports the objective to focus new development in the centre of urban areas.	✓
12	Community cohesion	The site is located near local facilities and amenities and the development is not expected to have an impact on local services e.g. school places. The proposal would provide for around 1 hectare of open land.	✓
13	Housing	The development would provide 80 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: West Hemel Hempstead

SA Objective		West Hemel Hempstead (LA3)	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats and there are a number of TPOs located within the site.	x
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located at a moderate distance from shops and facilities, which could increase the need to travel by car to access them. Walking and cycling may be discouraged due to the topography of the area. These factors could increase the growth in greenhouse gas emissions.	x
		The development would be large enough for district heating opportunities to be explored.	✓
5	Air Quality	This site is located at a moderate distance from shops and facilities, which could increase the need to travel by car to access them. Walking and cycling may be discouraged due to the topography of the area. These factors could increase the growth in airborne emissions.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects	-
8	Historic environment	The majority (>50%) of the site is located in an Area of Archaeological Significance (“Cropmarks of occupation and finds of Roman and Medieval date”). The Grade II Listed Building “Pouchen End Hall” is located 100m to the west of the site. Effects against this objective are therefore uncertain.	?
9	Landscape / Townscape	Development of this site would have a visual impact on the landscape of the Bulbourne Valley (with parts of the area being visible from the opposite valley side) and the nearby Chilterns AONB. Development could impact on the existing green link between Shrubhill Common and the countryside.	x
10	Health and wellbeing	Development may affect access to the public rights of way that cross the site, however development at this site would provide opportunities for a new park and/or open space and walking and cycling links.	✓
		The site is located at a moderate distance from existing facilities and the topography of the area could discourage walking and cycling. The southern end of the site is located near the A41 and the railway, which could result in noise levels that affect health and wellbeing.	?

SA Objective		West Hemel Hempstead (LA3)	
11	Sustainable locations	There is a community hub planned as part of the development which will meet some day to day needs and help reduce the need to travel. In addition, the development could provide a new bus loop which could be used by new and existing residents and provide opportunities to avoid car use. The development could also improve bus patronage for existing services and support their viability.	✓
12	Community cohesion	A community hub is planned which would provide new infrastructure (e.g. school and healthcare facilities) which will meet some day to day needs as well as taking pressure off existing local services and infrastructure. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	This development would allow 1,250 new dwellings.	✓✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Civic Centre Site, Hemel Hempstead

SA Objective		Civic Centre Site	
1	Biodiversity	There may be some biodiversity value along the river corridor (western boundary of the site), however no predicted effects are envisaged given the vast majority of the site is previously developed land.	-
2	Water	The River Gade runs along the western boundary of the site and therefore any developments close to the river may have an adverse effect on water quality. This will need to be closely controlled and monitored.	?
3	Flood risk	The western edge of the site is adjacent to the River Gade and within Flood Zone 2 and 3. This is a very small area and development should be able to avoid these areas of higher risk. Parts of the site are at higher risk of surface water flooding.	?
4	Climate change	The site's location in the town centre could encourage cycling and walking instead of use of the car to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location in the town centre could encourage cycling and walking instead of use of the car to access facilities. This could reduce the growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	The site is close to Listed Buildings (Baptist Church and Listed Buildings on Marlowes). The north eastern corner of the site is within an area of archaeological significance. Effects against this objective are uncertain.	?
9	Landscape / Townscape	Regenerating the old civic centre could improve the local townscape.	✓
10	Health and wellbeing	The site's location in the town centre could encourage use of active modes of transport.	✓
11	Sustainable locations	The site is located in the town centre of a main settlement, close to key services. Providing new homes in the town centre could enable local people to live near to their work. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would provide 200 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Ebberns Road, Hemel Hempstead

SA Objective		Ebberns Road	
1	Biodiversity	Development at this site may create additional pressure at the adjacent Grand Union Canal Wildlife Site.	?
2	Water	The site is located along the Grand Union Canal. Development may affect this watercourse.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is at high risk of surface water flooding.	?
4	Climate change	This site is moderately close to Apsley local centre and approximately 1.5km from the town centre. This could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	This site is moderately close to Apsley local centre and approximately 1.5km from the town centre. This could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in greenhouse gas emissions.	✓
		The Lawn Lane AQMA could be affected by development of this site which lies to the north-west and which could generate additional traffic in the AQMA.	✗
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	No predicted effects	-
9	Landscape / Townscape	Building design and layout is required to respect the canal frontage and therefore this could improve the townscape within the area, particularly along the watercourse. Planting along the canal should also support this objective.	✓
10	Health and wellbeing	The site's location close to Apsley local centre and the town centre could encourage walking and cycling.	✓
11	Sustainable locations	The site is within a main settlement, moderately close to Apsley local centre and the town centre. Provision of housing at this site could support the vibrancy of Apsley local centre and Hemel Hempstead Town Centre. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality, however this needs to be considered against the loss of an established business in this location.	?
13	Housing	This site would provide 30 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of employment land and opportunities.	✗
		The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and Skills	Development of this site will result in the loss of employment land and opportunities.	✗
		Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Land at Turners Hill, Hemel Hempstead

SA Objective		Land at Turners Hill	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The hedgerows and trees are however to be retained and supplemented. The site is adjacent to a wildlife site (Paradise Fields Central) and increased use of this by the new residents could adversely affect the site.	✘
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site's location close to the town centre could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location close to the town centre could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in airborne emissions.	✓
6	Soils	This site is greenfield land, and development would result in soil sealing. The site is located on Grade 3 Agricultural land.	✘
7	Resource efficiency	No predicted effects	-
8	Historic environment	No predicted effects	-
9	Landscape / Townscape	Development of this greenfield site could result in minor adverse effects on local landscape quality.	✘
10	Health and wellbeing	The site's location close to the town centre could encourage the use of active modes of travel to access facilities. The site is adjacent to a wildlife site which would remain to provide alternative provision.	✓
11	Sustainable locations	The site is located within a main settlement, close to the town centre. Provision of housing at this site could support the vibrancy of the town centre. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would provide 58 dwellings.	✓
14	Sustainable prosperity	The site's location close to the town centre could allow local people to live near to their work. The provision of additional housing should help support the local economy.	✓
15	Employment and Skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: 233 London Road, Hemel Hempstead

SA Objective		233 London Road	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is in reasonable proximity to Apsley railway station (less than 1.5 km) and local bus routes. The site is within local centre which provides access to a moderate range of local services and facilities. The site is also fairly close to larger retail facilities on London Road. This could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is in fairly close proximity to Apsley railway station (less than 1.5 km) and local bus routes. The site is within local centre which provides access to a moderate range of local services and facilities. The site is also fairly close to larger retail facilities on London Road. This could encourage cycling and walking rather than use of the car to access facilities, reducing the growth in airborne emissions.	✓
		The site is within the London Road Apsley AQMA and therefore its development could affect this designation. The small number of dwellings involved however means that any effects would be minor.	✗
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	A grade II listed building is located to the north-west of the site.	?
9	Landscape / Townscape	Provision of housing at this site could support the vibrancy of Apsley local centre and Hemel Hempstead Town Centre. The small number of dwellings involved however means that any effects would be minor.	✓
10	Health and wellbeing	The site's proximity to local facilities could encourage walking and cycling.	✓
		The site is within an AQMA which could affect the health of residents.	✗
11	Sustainable locations	The site within a main settlement and is located near to local facilities and amenities. A significant positive effect has been identified.	✓✓
12	Community cohesion	No predicted effects.	-
13	Housing	The development would provide 10 new dwellings.	✓

14	Sustainable prosperity	Development of the site for housing would result in the loss of a small industrial unit.	x
		The site's location in reasonable proximity to the town centre could allow local people to live near to their work. The provision of additional housing should help support the local economy.	✓
15	Employment and Skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention, however it would result in the loss of a small industrial unit, with associated jobs.	x

Site Reference: Land r/o St Margaret's Way/ Datchworth Turn, Hemel Hempstead

SA Objective		Land r/o St Margaret's Way / Datchworth Turn	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is located at a distance from the town centre, however it is within reasonable proximity to Leverstock Green Local Centre, a primary school and the Maylands and Breakspear Park employment areas so walking and cycling could be encouraged for some journeys, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located at a distance from the town centre, however it is within reasonable proximity to Leverstock Green Local Centre, a primary school and the Maylands and Breakspear Park employment areas so walking and cycling could be encouraged for some journeys, reducing the growth in airborne emissions.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this greenfield site could result in minor adverse effects on local landscape quality.	x
10	Health and wellbeing	Development of this site would result in the loss of open land which could currently be used for recreation. The site's location close to the Maylands and Breakspear Park employment areas could allow people to live close to their work.	?
11	Sustainable locations	The site is on the edge of a main settlement. It is close to some local facilities, including employment, however it is some distance from the town centre. Provision of housing at this site could support the vibrancy of the local centre at Leverstock Green.	✓
12	Community cohesion	Development of this site would result in the loss of open land which could currently be used for recreation.	x
		By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	This development would provide 50 new dwellings.	✓
14	Sustainable prosperity	Provision of housing at this site could support the vibrancy of the local centre at Leverstock Green.	✓
15	Employment and Skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Cupid Green Depot, Hemel Hempstead

SA Objective		Cupid Green Depot	
1	Biodiversity	No predicted effects	-
2	Water	No predicted effects	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources, however there is a small area which is at a higher risk of surface water flooding.	-
4	Climate change	The site is located at a distance from the town centre, however it is within reasonable proximity to local amenities, a primary school and employment areas, so walking and cycling could be encouraged for some journeys, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located at a distance from the town centre, however it is within reasonable proximity to local amenities, a primary school and employment areas, so walking and cycling could be encouraged for some journeys, reducing the growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects	-
8	Historic environment	No predicted effects	-
9	Landscape / Townscape	Regenerating the old depot area could improve the local townscape.	✓
10	Health and wellbeing	The site's proximity to amenities means that active travel modes could be used.	✓
11	Sustainable locations	The site is located at a distance from the town centre, however it is within reasonable proximity to local amenities, a primary school and employment areas.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would provide c.360 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of employment land, however development can only take place once a suitable alternative location is identified which will deliver enhanced/expanded facilities. Therefore, it is likely that there would be no net loss in employment.	?
15	Employment and skills	Development of this site is reliant on the identification of a suitable alternative location to deliver enhanced/expanded facilities. The existing facilities are constrained by the inability to expand. An alternative site is proposed as part of Hemel Garden Communities which could unlock the potential for additional facilities and with that additional jobs.	?

Site Reference: Kier Park, Hemel Hempstead

SA Objective		Kier Park	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Part of the site is shown to be at higher risk of surface water flooding.	?
4	Climate change	The site is close to Maylands local centre and has good access to public transport which could decrease the need to travel by car and reduce the level of growth in greenhouse gas emissions.	✓
5	Air Quality	The site is close to Maylands local centre and has good access to public transport which could decrease the need to travel by car and reduce growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Regenerating this employment area could improve the local townscape.	✓
10	Health and wellbeing	The site is close to local services which could encourage active travel such as walking and cycling.	✓
11	Sustainable locations	The site is within a main settlement. It is close to some local facilities, including employment. Provision of housing at this site could support the vibrancy of the local area. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality	✓
13	Housing	The development would deliver 250 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of potential employment land but is still expected to deliver a reasonable amount of new office floorspace.	?
		Provision of housing at this site could help the local economy and encourage provision of local services.	✓
15	Employment and skills	Development of this site will result in the loss of potential employment land but is still expected to deliver a reasonable amount of new office floorspace.	?
		Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Symbio Place, Whiteleaf Road, Hemel Hempstead

SA Objective		Symbio Place, Whiteleaf Road	
1	Biodiversity	The site is close to Boxmoor Common Local Wildlife Site.	?
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is within close proximity to Hemel Hempstead train station. It is also fairly close to amenities within Hemel Hempstead town centre and Apsley local centre. Use of sustainable modes of travel could therefore be encouraged which could reduce the level of growth in greenhouse gas emissions.	✓
5	Air Quality	The site is within close proximity to Hemel Hempstead train station. It is also fairly close to amenities within Hemel Hempstead town centre and Apsley local centre. Use of sustainable models of travel could therefore be encouraged which could reduce the level of growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is close to Box Moor which is of local value as a heritage asset.	?
9	Landscape / Townscape	Provision of housing at this site and redevelopment of the industrial unit may improve the local townscape.	✓
10	Health and wellbeing	The site's location close to local amenities could encourage the use of active modes of travel to access facilities. The site is also adjacent to open space (a wildlife site) which may be used for recreation.	✓
11	Sustainable locations	The site is within close proximity to Hemel Hempstead train station. It is also in reasonable proximity to amenities within Hemel Hempstead town centre and Apsley local centre. A significant positive effect has been identified.	✓✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality	✓
13	Housing	The proposal allows for c.180 new dwellings.	✓
14	Sustainable prosperity	Part of the site is within the Two Waters General Employment Area, which would be lost, along with associated employment opportunities.	x
		Provision of housing at this site could help the local economy and encourage provision of local services.	✓
15	Employment and skills	Provision of housing at this site should help the local economy and encourage provision of local services.	✓
		Part of the site is within the Two Waters General Employment Area, which would be lost, along with associated employment opportunities.	x

Site Reference: South of Green Lane, Hemel Hempstead

SA Objective		South of Green Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	The site is located at a distance from the town centre, however it is within reasonable proximity to Leverstock Green Local Centre, a primary school and the Maylands and Breakspear Park employment areas so walking and cycling could be encouraged for some journeys, reducing the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located at a distance from the town centre, however it is within reasonable proximity to Leverstock Green Local Centre, a primary school and the Maylands and Breakspear Park employment areas so walking and cycling could be encouraged for some journeys, reducing the growth in airborne emissions.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	Part of the site is within an Area of Archaeological Significance and has a Grade II Listed Building nearby.	?
9	Landscape / Townscape	Development here would expand Hemel Hempstead into open countryside.	x
10	Health and wellbeing	Development of this site would result in the loss of open land which could currently be used for recreation.	x
		The site's location close to the Maylands and Breakspear Park employment areas could allow people to live close to their work, which could encourage active travel.	✓
11	Sustainable locations	The site is on the edge of a main settlement. It is close to some local facilities, including employment, though it is some distance from the town centre. Provision of housing at this site could support the vibrancy of the local centre at Leverstock Green.	✓
12	Community cohesion	Development of this site would result in the loss of open land which could currently be used for recreation.	x
		By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	The development would provide 80 new dwellings.	✓
14	Sustainable prosperity	Provision of housing at this site could support the vibrancy of the local centre at Leverstock Green.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: HH16 Two Waters Road/A41 Junction

SA Objective		HH16 Two Waters Road/A41 Junction	
1	Biodiversity	The site is greenfield and there would therefore be a loss of habitats. The site is adjacent to Roughdown Common SSSI which may be subject to an increase in recreational pressure as a result of the development. However, the development would be required to protect the nature reserve and the proposed use of the site for employment may not give rise to the same level of recreational pressure as would be experienced by other forms of development.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not with Flood Risk Zones but Two Waters Road is susceptible to surface water flooding. This will need to be taken into consideration in a flood risk assessment.	-
4	Climate change	The site is in a relatively sustainable location with good access to Hemel Hempstead train station, as well as being accessible by the local bus network. This should help reduce growth in greenhouse gas emissions.	✓
5	Air Quality	Additional employment development at this location could exacerbate air quality issues in the AQMAs at London Road and Lawns Lane, though the site is in a relatively sustainable location with good access to Hemel Hempstead train station, as well as being accessible by the local bus network, which could reduce reliance on the car.	?
6	Soils	Development on this greenfield site would result in soil loss and sealing.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this site would fill the gap between the A41 and the railway to the north west of Two Waters Road, with associated adverse effects on local landscape at this gateway to Hemel Hempstead. To mitigate some of the adverse effects, development would be required to strengthen landscaping, if necessary, to ensure that the development is not visible from the countryside beyond the A41.	x
10	Health and wellbeing	There is a public footpath running through the site and so development here would have adverse effects for those using the footpath.	?
11	Sustainable locations	Whilst being somewhat detached from the main residential areas, the site is in a relatively sustainable location with good access to Hemel Hempstead train station, as well as being accessible by the local bus network.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-

SA Objective		HH16 Two Waters Road/A41 Junction	
14	Sustainable prosperity	Provision of new employment development will have positive effects for the local economy. The site would provide 20,000 sqm of employment space, therefore a significant positive has been identified.	✓✓
15	Employment and Skills	Provision of new employment development will have positive effects for the provision of new employment opportunities in this part of the Borough. The site would provide 20,000 sqm of employment space, therefore a significant positive has been identified.	✓✓

Site Reference: HH20 Breakspear Way/ Green Lane/ Boundary Way

SA Objective		HH20 Breakspear Way/ Green Lane/ Boundary Way	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats.	✘
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	The site is in a sustainable location with good access to public transport which should help to reduce levels of growth in greenhouse gas emissions.	✓
5	Air Quality	The site is in reasonable proximity to Maylands local centre and has good access to public transport which could decrease the need to travel by car and reduce growth in airborne emissions. Site is also adjacent to the A414 and Junction 8 of the M1, where congestion is a known issue. Any increase in traffic in this location could have an adverse impact on air quality.	?
6	Soils	This is a greenfield site and therefore development would result in the loss of soils and soil sealing.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site adjacent to an Area of Archaeological Significance associated with 'Romano-British religious complex at Wood Lane End'. Effects on this objective are uncertain.	?
9	Landscape / Townscape	Development would result in the loss of some of the remaining open land between Hemel Hempstead and the M1, with associated adverse effects on the local landscape.	✘
10	Health and wellbeing	The development would be required to provide pedestrian and cycle access from Buncefield Lane and Boundary Way which would help to enable healthy travel choices.	?
11	Sustainable locations	The site is in a sustainable location with good access to public transport. The development would be required to provide pedestrian and cycle access from Buncefield Lane and Boundary Way.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-
14	Sustainable prosperity	Provision of new employment development will have positive effects for the local economy. The site would provide 48,000 sqm of employment space, therefore a significant positive has been identified.	✓✓
15	Employment and Skills	Provision of new employment development will have positive effects for the provision of new employment opportunities in the Borough and sub-region. The site would provide 48,000sqm of employment space, therefore a significant positive has been identified.	✓✓

Site Reference: HH27 Jarman Park

SA Objective		HH27 Jarman Park	
1	Biodiversity	The site is a former landfill site which is currently scrub land which could have some biodiversity value. Development may result in some loss of biodiversity.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3.	-
4	Climate change	The site is outside of the centre of Hemel Hempstead, and although only 1.5 km away the proposed uses are likely to encourage use of the car, leading to a growth in ghg emissions. There is however potential for some linked trips to the facilities adjacent to this site, including the leisure park and superstore.	?
5	Air Quality	The site is outside of the centre of Hemel Hempstead, and although only 1.5 km away the proposed uses are likely to encourage use of the car, leading to a growth in airborne emissions. There is however potential for some linked trips to the facilities adjacent to this site, including the leisure park and superstore.	?
6	Soils	The site is brownfield, being a former landfill site and may require remediation which would improve soil quality.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this site would result in the loss of scrub land. It is an important gateway location and therefore the design and landscaping of the development needs to take this into account.	?
10	Health and wellbeing	No predicted effects.	-
11	Sustainable locations	Whilst the site is outside of the centre of Hemel Hempstead it is in a relatively sustainable location.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-
14	Sustainable prosperity	Development of this site for retail uses supports this objective by contributing employment space.	✓
15	Employment and Skills	Development of this site for retail uses supports this objective by providing local employment opportunities.	✓

Site Reference: HH28 Bunkers Park

SA Objective		HH28 Bunkers Park	
1	Biodiversity	Development of this site for its proposed uses would result in loss of a small amount of greenfield land and there would therefore be loss or damage of some habitats. However, existing trees and hedgerows are to be maintained, with further planting potentially being undertaken, therefore the overall effects on biodiversity are uncertain.	?
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	This site is located on the edge of Hemel Hempstead and many visitors would have to travel to the site by car. This may result in an increase in ghg emissions.	✘
5	Air Quality	This site is located on the edge of Hemel Hempstead and many visitors would have to travel to the site by car. This may result in an increase in airborne emissions.	✘
6	Soils	This site is currently greenfield and therefore its development does not support this objective.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	The site is an open land, though the intended development of a crematorium would be of low harm to the landscape. The building and car parking on the site is to be separated from adjacent residential properties by an effective landscape screen, and also be well screened from adjacent open areas. This could help to minimise the adverse effects.	✘
10	Health and wellbeing	The proposed use of this site as a crematorium supports the objective by providing a new facility that would help with overall wellbeing.	✓
11	Sustainable locations	The site is located on the south east edge of Hemel Hempstead and this location does not support this objective.	✘
12	Community cohesion	The proposed use of part of this site as a cemetery and crematorium supports this objective.	✓
13	Housing	No predicted effects.	-
14	Sustainable prosperity	No predicted effects.	-
15	Employment and Skills	Development of this site in part for a crematorium supports this objective by providing local employment opportunities.	✓

E.2 Berkhamsted Sites

Site Reference: South of Berkhamsted

SA Objective		South of Berkhamsted	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site also includes Long Green wildlife site, which could be adversely affected by development. A designated wildlife site (woodland) is located in the south-eastern corner of the site, adjacent to the A41. There are TPOs located in the north-eastern area of the site.	x
		Development at this large site would provide the opportunity to include a Suitable Alternative Natural Greenspace (SANG) area which could deliver local biodiversity enhancements as well as providing the potential to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at Ashridge Estate.	✓
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located reasonably close to the train station, bus stops and town centre though the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions. Whilst the site is situated within 2km of the railway station there remains the likelihood that a proportion will commute to work or make their journey to the station by private car.	x
		A circular bus route could be provided which could increase use of public transport over private car use, depending on the uptake of this mode. There are also plans for a local centre which could provide the amenities required, thereby reducing the need to travel for some day to day needs. These factors could help reduce the growth in greenhouse gas emissions. The development would be large enough for district heating opportunities to be explored.	✓
5	Air Quality	This site is located reasonably close to the train station, bus stops and town centre though the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in airborne emissions. However, a circular bus route could be provided, as well as provision of a local centre, both helping to reduce the need to travel. Whilst these factors would help to reduce the growth in airborne emissions, nevertheless the increased traffic resulting from the large number of new dwellings associated with the new development could contribute towards reduced air quality in the town and also exacerbate the air quality issues in Northchurch, where an Air Quality Management Area (AQMA) was designated in 2011 for part of the High Street.	?
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?

SA Objective		South of Berkhamsted	
8	Historic environment	<p>The western part of the site is located in the Ashlyns Hall estate which is of local value as a heritage asset with the Grade II Listed Buildings associated with Ashlyns Hall being in close proximity.</p> <p>The County Archaeologist has identified that there is potential that archaeological remains are present in the area between the A41 and Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation <i>in situ</i>. Archaeological assessment would therefore be required before the submission of a planning application.</p>	✘
9	Landscape / Townscape	Development of this site would expand Berkhamsted into countryside on the upper valley side and could impact on the Green Gateway into the town. There could be a possible impact on the transition area from urban to countryside. The site is located at the top of a steep gradient and is rated as having moderate-high susceptibility to landscape change.	✘
10	Health and wellbeing	The site is located reasonably close to the town centre but at a gradient which could discourage walking and cycling. The site is located near the A41 which could result in noise levels that could affect health and wellbeing even with the proposed acoustic bunds in place.	✘
		<p>New open space and recreation facilities provided as part of the development would provide recreational opportunities for new and existing residents of the area.</p> <p>The provision of potential new or enhanced healthcare facilities will help to improve everyone's access to healthcare.</p>	✓
11	Sustainable locations	There is a local centre planned as part of the development which will meet some day to day needs and help reduce the need to travel. In addition, the development could provide a new bus loop which could be used by new and existing residents and provide opportunities to avoid car use. The development could also improve bus patronage for existing services and support their viability.	✓
12	Community cohesion	A local centre is planned which would provide new infrastructure (e.g. school and healthcare facilities) which will meet some day to day needs as well as taking pressure off existing local services and infrastructure. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide a large amount of new housing (c.850).	✓✓
14	Sustainable prosperity	As the development of this site should provide a large amount of additional housing, this increased number of residents in the town would make facilities and shops more viable. Development at this location could provide some small business units.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services. The site also includes a local centre which could offer employment opportunities.	✓

Site Reference: Haslam Playing Fields, Shootersway, Berkhamsted

SA Objective		Haslam Playing Fields, Shootersway	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. Although the closely mown improved grassland may be of limited biodiversity value it could still be an important reservoir for wildlife. The perimeter hedgerows and trees will also provide important habitats.	x
		There are opportunities to provide biodiversity enhancements including towards the southern part of the site.	✓
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	This site is in a low risk flood zone and not in flood risk zone 2 or 3. The site is at low risk of flooding from all sources, but there are recorded incidents of flooding at this site.	?
4	Climate change	This site is located a reasonable distance from the town centre but the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions. The site is not well served by public transport.	x
5	Air Quality	This site is located a reasonable distance from the town centre, but the gradient between the town centre and the site may discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. In addition, the site is not well served by public transport. Additional traffic created by the development could add to existing problems in the AQMA at Northchurch.	x
6	Soils	Development of this site would result in a loss of some greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The County Archaeologist has identified that there is a potential that archaeological remains are present in this area of Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation <i>in situ</i> . Archaeological assessment would therefore be required before the submission of a planning application.	?
9	Landscape / Townscape	Development of this site would expand Berkhamsted into countryside on the upper valley side and the site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	Development at the Haslam Fields part of the site would result in loss of playing pitches (serving pupils of Berkhamsted School), however there is scope to provide alternative pitches at the Haresfoot campus.	x

SA Objective		Haslam Playing Fields, Shootersway	
		<p>This site is close to the A41, which means there would be noise disturbance which could affect the health and well-being of the new residents.</p> <p>The site is located a reasonable distance from the town centre, but the gradient between the town centre and the site may discourage walking and cycling.</p>	
		Public open space on the site could be provided as part of the development.	✓
11	Sustainable locations	The site is located a reasonable distance from the town centre, but is not well connected by public transport.	✗
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.150 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Land east of Darrs Lane, Berkhamsted

SA Objective		Land east of Darrs Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. The site is within 2km of the Chilterns Beechwoods SAC which may give rise to increased recreational pressures.	x
		Development at this large site would provide the opportunity to include a Suitable Alternative Natural Greenspace (SANG) area which could deliver local biodiversity enhancements as well as providing the potential to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at Ashridge Estate.	✓
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	This site is in a low risk flood zone and not in flood risk zone 2 or 3. The site is at low risk of flooding from all sources.	
4	Climate change	The site is located at a distance from the town centre, which would discourage walking and cycling to main services and facilities. This could mean that the use of the car would increase, giving an increase in greenhouse gas emissions. However, the site is located relatively close to a number of local shops (in Northchurch) which could help to reduce these effects, as could the potential support for a bus service to serve this part of the town.	x
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions.. However, the site is located relatively close to a number of local shops (in Northchurch) which could help to reduce these effects, as could the potential support for a bus service to serve this part of the town. Additional traffic created by the development at this site could add to existing problems in the AQMA at Northchurch.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	<p>The County Archaeologist has identified that there is a potential that archaeological remains are present in the area between the A41 and Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation <i>in situ</i>. Archaeological assessment would therefore be required before the submission of a planning application.</p> <p>The route of Grim’s Ditch bisects the site towards the top of the slope, and part of the asset is designated a Scheduled Monument on land adjacent to the site. The site also falls partly within an Area of Archaeological Significance related to Grim’s Ditch. A grade II listed building is located on the edge of the south western corner of the site.</p> <p>The western parcel of the site is within Woodcock Hill estate which is of local value as a heritage asset.</p>	x
9	Landscape Townscape	/ The site is adjacent to the Chilterns AONB and development could result in south-westerly expansion of Berkhamsted into countryside in a prominent location. The site has moderate-high susceptibility to landscape change.	x

SA Objective		Land east of Darrs Lane	
10	Health and wellbeing	Development may affect access to the public rights of way that cross the site, however development at this site would provide opportunities for new country park and/or open space and walking and cycling links.	✓
11	Sustainable locations	The site is located at a distance from the town centre but relatively close to the facilities in Northchurch and is close to a strategic employment site.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, including the potential for a new school and local centre, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide c.300 new dwellings. .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Land adj. to Blegberry Gardens, Shootersway, Berkhamsted

SA Objective		Land adj. to Blegberry Gardens, Shootersway	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. The site is also adjacent to a wildlife site ("Meadow S.W. of Shootersway Road"). There are TPOs on the eastern part of the site.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. However, part of the site is at high risk of surface water flooding.	?
4	Climate change	This site is located some distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions. The site is not well connected by public transport.	x
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. In addition, the gradient between the town centre and the site may make walking and cycling difficult and the site is not well connected by public transport. Additional traffic created by the development could add to existing problems in the AQMA at Northchurch.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site is located in an area of archaeological significance (Middle to Late Iron Age occupation activity S of Shooters Way"). The County Archaeologist has identified that there is a potential that archaeological remains are present in the area between the A41 and Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation <i>in situ</i> . Archaeological assessment would therefore be required before the submission of a planning application.	?
9	Landscape / Townscape	Development of this site would expand Berkhamsted into countryside to the south-west of the town and the site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	The site is located at a distance from the town centre, which could discourage walking and cycling, particularly given the steep gradient. The site is located near the A41 which could result in noise levels that could affect health and wellbeing.	x
		The development will include new open space for recreation.	✓
11	Sustainable locations	The site is located at a distance from the town centre and is not well connected by public transport.	x
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓

SA Objective		Land adj. to Blegberry Gardens, Shootersway	
13	Housing	Development of this site would provide new housing (c.80 dwellings).	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: British Film Institute Archive, Berkhamsted

SA Objective		British Film Institute Archive	
1	Biodiversity	No predicted effects	-
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	?
4	Climate change	This site is located a reasonable distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions. The site is not well served by public transport.	x
5	Air Quality	This site is located a reasonable distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. In addition, the gradient between the town centre and the site may make walking and cycling difficult. The site is not well served by public transport. Additional traffic created by the development could add to existing problems in the AQMA at Northchurch.	x
6	Soils	The site is previously developed land.	✓
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site contains two Grade II listed buildings (Ernest Lindgreen House and Granary at Ernest Lindgreen House). Proposals seek to retain and where possible enhance the setting of these heritage assets. The small part of the south eastern corner of the site is in an area of archaeological significance ("Peterborough type urn found at Chesham Road").	?
9	Landscape / Townscape	The site has low-moderate susceptibility to landscape change though the removal of any of the existing buildings may have negative impacts for the local townscape.	?
10	Health and wellbeing	This site is close to the A41, which means there would be noise disturbance which could affect the health and well-being of the new residents. The site is located at a distance from the town centre, which could discourage walking and cycling and the gradient between the town centre and the site may exacerbate this issue.	x
		New open space will be provided as part of the development.	✓
11	Sustainable locations	The site is located a reasonable distance from the town centre and is not well served by public transport.	x

SA Objective		British Film Institute Archive	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	This proposal would allow 90 new dwellings.	✓
14	Sustainable prosperity	Development of this site will result in the loss of employment land and opportunities (albeit specialist roles) in this location.	✗
		The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	<p>Site currently employs approximately 100 people which would be lost through redevelopment. These are predominantly specialist jobs that would be retained through relocation of the facilities to another BFI site.</p> <p>Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.</p>	?

Site Reference: Land at Rossway Farm (between Shootersway and A41), Berkhamsted

SA Objective		Land at Rossway Farm (between Shootersway and A41)	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site has a number of TPOs along the boundary and is adjacent to the “Meadow S.W. of Shootersway” wildlife site.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	This site is located some distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions.	x
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. In addition, the gradient between the town centre and the site may make walking and cycling difficult.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site falls partly in an area of archaeological significance (“Middle to Late Iron Age occupation activity S of Shooters Way”) and is close to a Grade II Listed Building (“Old Cottage”). The County Archaeologist has identified that there is a potential that archaeological remains are present in the area between the A41 and Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation in situ. Archaeological assessment would therefore be required before the submission of a planning application.	?
9	Landscape / Townscape	Development of this site would expand Berkhamsted into countryside on the upper valley side. Development of this site would be likely to impact upon the setting of the Chilterns AONB due to its proximity to the west of the site, though the site has low-moderate susceptibility to landscape change.	x
10	Health and wellbeing	This site is close to the A41, which means there would be noise disturbance which could affect the health and well-being of the new residents.	x
		The site is located at a distance from the town centre, which could discourage walking and cycling and the gradient between the town centre and the site may exacerbate this issue.	
		The development will include an area of open space for recreation.	✓
11	Sustainable locations	The site is located at a distance from the town centre and the local bus service is infrequent.	x

SA Objective		Land at Rosway Farm (between Shootersway and A41)	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality. The site is of a scale that could deliver new facilities, such as land for a primary school.	✓
13	Housing	The proposal would allow 40 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Land between Hanburys and the A41, Berkhamsted

SA Objective		Land between Hanburys and the A41	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. There are TPOs in place on the edge of the site.	✘
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	This site is located a reasonable distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions.	✘
5	Air Quality	This site is located a reasonable distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of airborne emissions. Additional traffic created by the development could add to existing problems in the AQMA at Northchurch.	✘
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is close to two Grade II listed buildings (Ernest Lindgreen House and Granary at Ernest Lindgreen House). The County Archaeologist has identified that there is a potential that archaeological remains are present in this area of Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation in situ. Archaeological assessment would therefore be required before the submission of a planning application.	?
9	Landscape Townscape	Development of this site would expand Berkhamsted into countryside on the upper valley side. The site has a moderate susceptibility to landscape change.	✘
10	Health and wellbeing	This site is close to the A41 which means there would be noise disturbance which could affect the health and wellbeing of the new residents.	✘
		The site is located at a distance from the town centre which may discourage walking and cycling and the gradient between the town centre and the site may exacerbate this issue.	
		There would be a loss of green space. New open space will be provided as part of the development.	✓
11	Sustainable locations	The site is located a reasonable distance from the town centre and is not well served by public transport.	✘
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓

SA Objective		Land between Hanburys and the A41	
13	Housing	The development should provide 70 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Lock Field, Northchurch, Berkhamsted

SA Objective		Lock Field, Northchurch	
1	Biodiversity	The site is predominantly greenfield and there would therefore be loss of some habitats. The site is within 2km of the Chilterns Beechwoods SAC which may give rise to increased recreational pressures.	✘
2	Water	Uncertain effect from the development of this site on water quality and quantity. This is due to the proximity of the site to the canal and dependent on amount of run off. Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located at some distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions. In addition, the site is relatively close to a local centre which would help reduce the need to travel.	✓
5	Air Quality	The site is located at some distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. The site is also within easy walking distance of the local centre. This could decrease the need to travel by car and reduce growth in airborne emissions. Additional traffic created by the development at Lockfield could add to existing problems in the AQMA at Northchurch.	?
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	There is the potential for new development to impact on the setting of the Grand Union Canal. Much of the site is within an Area of Archaeological Significance.	?
9	Landscape / Townscape	The site is located across the railway line from the Chilterns AONB and development could affect the setting of the AONB. Development at this location would result in easterly expansion of Berkhamsted into countryside. The site has moderate susceptibility to landscape change.	✘
10	Health and wellbeing	This site could provide new open space as well as opportunities for a new canalside walk, and the access to local facilities could also encourage walking and cycling.	✓
		This site is adjacent to the railway, which means there would be noise disturbance which could affect the health and well-being of the new residents.	✘
11	Sustainable locations	Whilst the site is on the edge of the town it is located near a school and local centre and has a frequent bus service.	✓

SA Objective		Lock Field, Northchurch	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.60 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Bank Mill Lane, Berkhamsted

SA Objective		Bank Mill Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. Development of the site may however provide an opportunity for biodiversity enhancements along the river corridor.	✘
2	Water	Any development close to the river and in the floodplain could result in adverse effects on water quality. Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	Approximately 50% of this site is in Flood Zones 2, 3a and 3b. New development will need to avoid and mitigate current and potential future increased flood risk. Residential development could be located away from the highest flood risk zone.	✘
4	Climate change	The site is located a reasonable distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located a reasonable distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. This could decrease the need to travel by car and reduce growth in airborne emissions. Additional traffic created by the development at Bank Mill could add to existing problems in the AQMA at Northchurch.	?
6	Soils	This site is greenfield land, and development would result in soil sealing.	✘
7	Resource efficiency	The site is located within the Sand & Gravel Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site is located within the Berkhamsted Conservation Area. Development has the potential for adverse effects on this area.	?
9	Landscape / Townscape	Development at this location would result in easterly expansion of Berkhamsted into countryside. The site may affect the setting of the nearby Chilterns AONB and it has moderate-high susceptibility to landscape change.	✘
10	Health and wellbeing	It is proposed that the development would provide new local play space which would have benefits for both the new and existing population of the local area. The level access to the town centre would allow easy walking and cycling and encourage healthy modes of travel.	✓
11	Sustainable locations	Whilst the site is on the edge of the town and some distance from local services it does have level access to the town centre and local shops.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.50 dwellings) and also specialist elderly persons' accommodation.	✓

SA Objective		Bank Mill Lane	
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Former Durrants Furniture, Billet Lane (Jewson Site), Berkhamsted

SA Objective		Former Durrants Furniture, Billet Lane (Jewson Site)	
1	Biodiversity	There are TPOs in place adjacent the site boundary. The site is within 2km of the Chilterns Beechwoods SAC which may give rise to increased recreational pressures.	?
2	Water	The site is adjacent to the Grand Union Canal and the River Bulbourne. Development may affect these watercourses.	?
3	Flood risk	A small part of the site along the southern boundary is within Flood Zones 3a and 3b, with the remainder within Flood Zone 2.	x
4	Climate change	The site is located at some distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions. In addition, the site is relatively close to a local centre which would help reduce the need to travel.	✓
5	Air Quality	The site is located at some distance from the town centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the town. The site is also within easy walking distance of the local centre. This could decrease the need to travel by car and reduce growth in airborne emissions. Additional traffic created by the development at Lockfield could add to existing problems in the AQMA at Northchurch.	?
6	Soils	The development would make use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site lies wholly within an Area of Archaeological Significance and there are a small number of Grade II Listed Buildings in relatively close proximity to the site.	?
9	Landscape / Townscape	The site is located within 700m of the Chilterns AONB and development could affect the setting of the AONB. However, redevelopment of the current industrial unit may bring visual improvements to the local townscape.	?
10	Health and wellbeing	The flat access to facilities and services may encourage people to use active travel modes.	?
11	Sustainable locations	Whilst the site is on the edge of the town it is located near a school and local centre.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.40 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Hanburys, Shootersway, Berkhamsted

SA Objective		Hanburys, Shootersway (LA4)	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	✘
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3. However the majority of the site is at a higher risk of surface water flooding.	?
4	Climate change	This site is located a reasonable distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions.	✘
5	Air Quality	This site is located a reasonable distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. In addition, the gradient between the town centre and the site may make walking and cycling difficult. Additional traffic created by the development could add to existing problems in the AQMA at Northchurch.	✘
6	Soils	Development of this site would result in a loss of predominantly greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is close to two Grade II listed buildings (Ernest Lindgreen House and Granary at Ernest Lindgreen House). The County Archaeologist has identified that there is a potential that archaeological remains are present in this area of Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation in situ. Archaeological assessment would therefore be required before the submission of a planning application.	?
9	Landscape / Townscape	Development of this site would expand Berkhamsted into countryside on the upper valley side.	✘
10	Health and wellbeing	The site is located at a distance from the town centre, which could discourage walking and cycling. The site is located near the A41 which could result in noise levels that could affect health. The gradient between the town centre and the site may discourage walking and cycling.	✘
11	Sustainable locations	The site is located a reasonable distance from the town centre and is not well served by public transport.	✘
		Developing this site could help to revitalise the town or local centres by providing additional housing to help maintain community vibrancy and vitality.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓

SA Objective		Hanburys, Shootersway (LA4)	
13	Housing	This development would provide 40 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and Skills	Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Civic Centre and land to the r/o High Street (MU9), Berkhamsted

SA Objective		Berkhamsted Civic Centre and land to the r/o High Street (MU9)	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3. However the majority of the site is at a high risk of surface water flooding.	?
4	Climate change	The site is relatively close to the town centre with good level access which could encourage cycling and walking rather than use of the car, which would help to reduce the growth in greenhouse gas emissions. This is however dependent on these sustainable travel options being taken up.	✓
5	Air Quality	The site is relatively close to the town centre with good level access which could encourage cycling and walking rather than use of the car, which would help reduce growth in airborne emissions.	✓
6	Soils	The development makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is within Berkhamsted Conservation Area. It is adjacent to a Grade II Listed Building and in the "Berkhamsted, medieval castle & town, prehistoric & Roman occupation" Area of Archaeological Significance. Careful design could allow for the site's development to benefit these designations.	?
9	Landscape / Townscape	Development of this site could be an opportunity to enhance the local townscape.	?
10	Health and wellbeing	The site's location in the town centre could encourage use active modes of travel to access facilities.	✓
11	Sustainable locations	The site is located in the town centre and close to key services.	✓
12	Community cohesion	No predicted effects	-
13	Housing	The development would deliver 16 new dwellings.	✓
14	Sustainable prosperity	The site's location in the town centre could allow local people to live near to their work. The provision of additional housing should help support the local economy.	✓
15	Employment and Skills	Development of this site will likely result in the rationalisation and reconfiguration of the Civic Centre and depot. The effects of this on this objective are uncertain.	?
		Provision of housing at this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: BK13 Gossoms End/Billet Lane

SA Objective		BK13 Gossoms End/ Billet Lane	
1	Biodiversity	No predicted effects.	-
2	Water	The site is adjacent to the River Bulbourne/Grand Union Canal and development could affect the water quality of this water course.	?
3	Flood risk	The northern boundary and north-east part of the site is in within flood zones 2, 3a & 3b. A flood risk assessment will therefore be required.	?
4	Climate change	The site is located fairly close to the town centre which could decrease the need to travel by car to access facilities and would therefore reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located fairly close to the town centre which could decrease the need to travel by car to access facilities and would therefore reduce the growth in airborne emissions.	✓
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is within an Area of Archaeological Significance. This will need to be taken into account to ensure any adverse effects are mitigated.	?
9	Landscape / Townscape	The site's location adjacent to the River Bulbourne means that there is a need for sensitive design so as not to affect the character of the watercourse.	?
10	Health and wellbeing	The site's location close to the town centre could encourage the use of active modes of travel to access facilities.	✓
11	Sustainable locations	The site is located close to the local facilities in Berkhamsted town centre.	✓
12	Community cohesion	The site is fairly close to the local facilities in Berkhamsted town centre and various employment areas. It is also directly opposite to a sports centre.	✓
13	Housing	The proposal allows for around 30 dwellings.	✓
14	Sustainable prosperity	Although development resulted in the loss of a car sales and timber yard, this will be replaced by a food supermarket (and housing) and therefore employment opportunities should be maintained.	✓
15	Employment and Skills	The site's location close to the town centre could allow local people to live near to their work. The provision of additional housing should help support the local economy.	✓

E.3 Tring Sites

Site Reference: - East of Tring

SA Objective		East of Tring	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. The site is adjacent to the Grand Union Canal Wildlife Site and the Station Road/Grove Fields wildlife site.	x
		Large scale development could give rise to possible adverse effects on other important designated sites in the area (within 2km of the Chiltern Beechwood SAC, Tring Reservoirs SSSI). Suitable alternative natural greenspace may need to be required to offset such effects.	
		The size of the site provides the opportunity for the delivery of a Suitable Alternative Natural Greenspace (SANG) in the form of a park that could help to take recreational pressure off the Chilterns Beechwoods SAC at Ashridge Estate and Tring Park.	✓
2	Water	Considerable upgrades to the network are likely to be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3, however parts of the site are at a higher risk of surface water flooding.	?
4	Climate change	The site is located a distance from the town centre and employment opportunities. This could increase the use of the car to access town centre facilities and services and employment, thereby increasing the growth of greenhouse gas emissions.	x
		The site is located reasonably close to schools and the railway station, and there are existing cycle links to both the station and the town, with level access. Proposals for the site include the provision of new services and facilities such as new schools, a possible local centre and sports and leisure facilities which would also reduce the need to travel. The impact on greenhouse gas emission increases would depend on these sustainable options being taken up.	✓
		The development would be large enough for district heating opportunities to be explored.	
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. .	x
		There is level access and existing cycle links to the station and town centre which could encourage more sustainable travel. The effect on air quality depends on these sustainable options being taken up.	
		The site has the potential to provide a new link road to connect the Bulbourne Road with Station Road to alleviate pressure on existing north/south routes which can become congested at peak times. It is uncertain how this will affect local air quality in Tring, but if it relieves congestion in the town centre it could result in improvements.	✓
6	Soils	Development would result in loss of greenfield land and soil sealing. The majority of the site is located on Grade 2 agricultural land and therefore a significant adverse effect has been identified against the soils objective.	xx

SA Objective		East of Tring	
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The setting of Pendley Manor Locally Listed Park and Garden, (also a Listed Building) could be adversely affected, depending on which parts of the site is developed for housing. The plot is bisected by Marshcroft Lane (Roman Road) which crosses the canal on a Grade II listed bridge. There are a number of Grade II listed buildings surrounding the site. The south-west corner of the site is within an Area of Archaeological Significance.	x
9	Landscape / Townscape	Development of this site would expand Tring into open countryside on the eastern edge of the town. The site is adjacent to the Chilterns AONB (the boundary of which is delineated by Station Road) and the Grand Union Canal. The setting of both could be adversely affected by the development. Development would extend outside the town's current built form and would therefore have some adverse effects on landscape character. The site is considered to have moderate-high susceptibility to landscape change.	x
10	Health and wellbeing	Development of the site could allow for the provision new open space, including playing pitches. The existing cycle link to the town and station could encourage the local residents to have more active lifestyles. A site of this scale could deliver formal recreational facilities as well as open green space. In addition the provision of enhanced healthcare facilities will help to improve everyone's access to healthcare.	✓
11	Sustainable locations	The site is located at a distance from the town centre, however there is a frequent bus service and the site is also located relatively close to schools and the railway station. A site of this size will make a large contribution towards delivering new/enhanced facilities in Tring such as GP expansion and a new primary and secondary school, which would reduce the need to travel for some day to day needs.	✓
12	Community cohesion	The site is located at a distance from the town centre; however new local infrastructure would be provided as part of this development (e.g. schools and healthcare facilities) which will meet some day to day needs as well as taking pressure off existing local services and infrastructure. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c. 1,500 dwellings). Significant positive effects identified.	✓✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: New Mill, Tring

SA Objective		New Mill	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3, however parts of the site are at a higher risk of surface water flooding.	?
4	Climate change	The site is located a distance from the town centre and employment opportunities. This could increase the use of the car to access town centre facilities and services and employment, thereby increasing the growth of greenhouse gas emissions. greenhouse gas	x
		The site is located reasonably close to a local shop, schools and the railway station, and there are existing cycle links to both the station and the town. New local facilities may reduce the need to travel. The impact on greenhouse gas emission increases would depend on these sustainable options being taken up.	✓
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions..	x
		There are existing cycle links to the station and town centre which could encourage more sustainable travel. The effect on air quality depends on these sustainable options being taken up.	?
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this site would expand Tring into countryside on the eastern edge of the town. Development of the site may impact upon the setting of the Chilterns AONB due to its close proximity. The site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	There is potential for the development to provide local play space and open space.	✓
11	Sustainable locations	The site is located at a distance from the town centre, however the site is also located relatively close to a local shop, schools and is a reasonable distance from the railway station.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could deliver additional community facilities for Tring and could help to maintain community vibrancy and vitality. The site is of a scale that it could deliver new facilities..	✓
13	Housing	Development of this site would provide new housing (c.400 dwellings), .	✓

SA Objective		New Mill	
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Dunsley Farm, Tring

SA Objective		Dunsley Farm, Tring	
1	Biodiversity	The site is mainly greenfield and there would therefore be loss of some habitats. The eastern part of the site includes a designated Local Wildlife Site (Dunsley Bungalow Orchard & Pasture). The site is within 2km of the Chilterns Beechwoods SAC which may give rise to increased recreational pressures.	x
2	Water	Local upgrades to the network would be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3, however parts of the site are at a higher risk of surface water flooding.	?
4	Climate change	The site is relatively close to the town centre with good level access which could encourage cycling and walking rather than use of the car, which would help to reduce the growth in greenhouse gas emissions. This is however dependent on these sustainable travel options being taken up. New local facilities may further reduce the need to travel.	✓
5	Air Quality	The site is relatively close to the town centre with good level access which could encourage cycling and walking rather than use of the car, which would help reduce growth in airborne emissions. New local facilities may further reduce the need to travel.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	This site is located adjacent to Tring Park to the west and Pendley Manor to the east, which could be affected by the new development.	?
9	Landscape / Townscape	The site is adjacent to the Chilterns AONB and development could affect the setting of this designation. Development would extend Tring into countryside to the south-east. The site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	This option could provide the wider town with large areas of open space, and improved facilities.	✓
		This option is close to the A41, which means there would be noise disturbance which could affect the health and well-being of the new residents.	x
11	Sustainable locations	The site is relatively close to the town centre with good level access and is a reasonable distance from the railway station. New local facilities may further reduce the need to travel.	✓
12	Community cohesion	The site is of a scale that it could deliver new community facilities including a primary school and local centre, as well as new employment land and potential for a new secondary school. The site could also serve as a suitable site for the relocation of the fire and rescue services, currently located in the town centre.	✓
13	Housing	Development of this site would provide 400 new dwellings.	✓

SA Objective		Dunsley Farm, Tring	
14	Sustainable prosperity	Development of this site would provide additional employment floorspace to help to support the local economy. In addition, the new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	The site is promoted to deliver over 5ha of new employment land, which would be in addition to the existing businesses already on site. Employment development of this site would help to provide jobs for local people, whilst Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Icknield Way, West of Tring

SA Objective		Icknield Way, West of Tring (LA5 land previously allocated for employment)	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. The site is within 2km of the Chilterns Beechwoods SAC and is close to Miswell House Wildlife Site. Development here may create additional pressure on these sites.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located near a local centre and is adjacent to the town's main employment area. However, it is located 2km from the town centre. This could increase the use of the car to access town centre facilities and services, thereby increasing the growth of greenhouse gas emissions. There is also uncertainty around the level of out-commuting that may result from building houses on this site. If this is by car on the A41, there is the potential for additional growth in greenhouse gas emissions.	x
5	Air Quality	The site is located near a local centre and is adjacent to the town's main employment area. However, it is located 2km from the town centre. This could increase the use of the car to access town centre facilities and services, thereby increasing the growth of airborne emissions.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	The site is within 1km of the Chilterns AONB. Development of this site would be visible from Icknield Way and the Chilterns AONB, however the site is located in a previous housing allocation (LA5) which is being developed. The site's new use for housing instead of employment uses could result in a positive impact on the local landscape.	?
10	Health and wellbeing	Developing this site would allow for open space, though it would not be big enough for all the leisure space aspirations for Tring.	✓
		This site is close to the A41, which means there would be noise disturbance which could affect the health and well-being of the new residents, however the previous housing allocation to the south and west is being developed and would likely result in a lesser impact for this site. The site is at a distance from the town centre which could discourage active travel. Access to the public right of way which cuts across the site may be disrupted by the development.	?
11	Sustainable locations	The site is located near the local centre and is adjacent to main employment area. However it is located 2km from the town centre. The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy, thereby helping to support sustainable urban living.	✓

SA Objective		Icknield Way, West of Tring (LA5 land previously allocated for employment)	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could deliver additional community facilities for Tring and could help to maintain community vibrancy and vitality	✓
13	Housing	The development would provide 50 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and Skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention. However, the site was previously allocated for employment use and this would be lost.	✗

Site Reference: Miswell Lane, Tring

SA Objective		Miswell Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site is close to the Chiltern Beechwoods SAC and Miswell House Wildlife Site. Development here may create additional pressure on these sites.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located near a local centre and is adjacent to the town's main employment area. However, it is a reasonable distance from the town centre. This could increase the use of the car to access town centre facilities and services, thereby increasing the growth of greenhouse gas emissions. There is also uncertainty around the level of out-commuting that may result from building houses on this site. If this is by car on the A41, there is the potential for additional growth in greenhouse gas emissions.	x
5	Air Quality	The site is located near a local centre and is adjacent to the town's main employment area. However, it is a reasonable distance from the town centre. This could increase the use of the car to access town centre facilities and services, thereby increasing the growth of airborne emissions.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The development may affect the setting of the nearby Barn & Windmill Grade II Listed Building.	?
9	Landscape / Townscape	Development of this greenfield site could result in minor adverse effects on landscape quality.	x
10	Health and wellbeing	The site's location close to Tring centre could encourage use active modes of travel to access facilities.	✓
11	Sustainable locations	The site is located within a main settlement, 1.5km from the town centre.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	The development would provide 24 new dwellings.	✓
14	Sustainable prosperity	The site is located adjacent to a business estate and within 1.5km of the town centre. This could allow people to live near to their work. The provision of additional housing should help support the local economy.	✓
15	Employment and Skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: TR06 High Street/Brook Street

SA Objective		TR06 High Street/ Brook Street	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	The site is not with Flood Risk Zones but part of the site is susceptible to surface water flooding. This will need to be taken into consideration in a flood risk assessment.	?
4	Climate change	The site is located in a sustainable location which should help to reduce the need to travel by car and thereby reduce growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located in a sustainable location which should help to reduce the need to travel by car and thereby reduce growth in airborne emissions.	✓
6	Soils	The site is previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	Part of the site is within the Tring Conservation Area and in close proximity to a number of Listed Buildings. Careful design could allow for the site's development to benefit this designation.	?
		The replacement of the Local History Museum within the new development would have benefits against the sub objective to promote public education, enjoyment and access of heritage.	✓
9	Landscape / Townscape	Careful design of the development could bring improvements to the local townscape.	?
10	Health and wellbeing	The site's location in the centre of Tring could encourage use active modes of travel to access facilities.	✓
11	Sustainable locations	The site is located in the centre of Tring which supports this objective.	✓
12	Community cohesion	The replacement of the Local History Museum within the new development would have benefits for the local community.	✓
13	Housing	The redevelopment may provide some residential units on upper storeys.	?
14	Sustainable prosperity	The redevelopment would provide additional retail development and may also provide new offices on upper storeys.	✓
15	Employment and Skills	The redevelopment would provide additional retail development and may also provide new offices on upper storeys, with associated job provision.	✓

E.4 Bovingdon Sites

Site Reference: Grange Farm, Bovingdon

SA Objective		Grange Farm	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. The site is adjacent to a Local Wildlife Site and some Tree Preservation Orders (TPOs) exist along the north-eastern boundary of the site. These are likely to be retained through any development of the site.	✘
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3 but is at high risk of surface water flooding. Proposals include delivering alleviation measures which could deliver wider benefits for existing residents.	?
4	Climate change	The site is located reasonably close to the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
5	Air Quality	The site is located reasonably close to the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. This could decrease the need to travel by car and reduce growth in airborne emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. A large part of the site is located on Grade 2 agricultural land and therefore a significant adverse effect has been identified against the soils objective.	✘✘
7	Resource efficiency	The site is within the Brick Clay Mineral Safeguarding Area which could have implications for safeguarding mineral reserves.	?
8	Historic environment	There is a Grade II Listed Building (White Hart Cottage) in close proximity to the north-west corner of the site, but is currently well screened by mature tree growth. Effects are therefore uncertain.	?
9	Landscape / Townscape	Development at this prominent location would extend Bovingdon into countryside to the west of the village. The site has moderate susceptibility to landscape change.	✘
10	Health and wellbeing	Provision of new open space as part of the development, including allotments and a children's play area would provide benefits for both new and existing residents. Good level access to local facilities could encourage walking and cycling.	✓
11	Sustainable locations	This site is located reasonably close to the village centre and it has good level access which would enable relatively access to local facilities by walking and cycling. New local facilities and enhancements to public transport connections will support this objective.	✓

SA Objective		Grange Farm	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, including the potential for a new primary school or pre-school facility, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.250 dwellings), and the potential for some elderly persons' accommodation.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Chesham Road and Molyneaux Avenue, Bovingdon

SA Objective		Chesham Road and Molyneaux Avenue, Bovingdon (LA6)	
1	Biodiversity	This greenfield site is located in a high value local biodiversity wildlife corridor. Retaining existing trees and hedges, as well as providing for open space could help to mitigate these effects.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3, however part of the site is at a high risk of surface water flooding.	?
4	Climate change	The site is located reasonably close to the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions though there is a busy road between the site and the village which could discourage walking and cycling and increase reliance on the car. Providing pedestrian and cycle access to Hyde Lane and Lancaster Road, and promoting sustainable travel options support this objective.	✓
5	Air Quality	The site is located reasonably close to the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. This could decrease the need to travel by car and reduce growth in greenhouse gas emissions, though there is a busy road between the site and the village which could discourage walking and cycling and increase reliance on the car. Providing pedestrian and cycle access to Hyde Lane and Lancaster Road, and promoting sustainable travel options support this objective.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of the site would extend Bovingdon into countryside to the west of the village, though a number of built structures on the adjacent Bovingdon Airfield and HMP The Mount provides the site with a sense of enclosure from the wider landscape.	x
10	Health and wellbeing	Developing this site would provide opportunities for open space, and encourage walking and cycling; however, there is a busy road separating the site from the village centre which may pose an accident risk and discourage the elderly, disabled people and children from moving around freely in the area. Providing pedestrian and cycle access to Hyde Lane and Lancaster Road, and promoting sustainable travel options support this objective.	✓
11	Sustainable locations	This site is located reasonably close to the village centre, so facilities would be harder to access, and there is a busy road between them which may restrict the easy movement of people.	✓

SA Objective		Chesham Road and Molyneaux Avenue, Bovingdon (LA6)	
12	Community cohesion	The site is located near the prison which could result in anxiety related to the fear of crime. Incorporating perimeter development with outward facing buildings, dual fronted properties will address corners providing surveillance over areas of open space. This type of layout supports this objective.	✘
13	Housing	This development would provide c.40 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and Skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

E.5 Kings Langley Sites

Site Reference: Rectory Farm, Kings Langley

SA Objective		Rectory Farm	
1	Biodiversity	Located adjacent to a wildlife site, this is a partly greenfield site and there would therefore be loss of some habitats. Development would need to consider how to reduce the potential impact on the canal corridor. The Grand Union Canal is adjacent to the site and is lined by mature trees. There are a number of Tree Preservation Orders (TPOs) within and on the edge of the site.	✘
		Development of the site may provide the opportunity for environmental enhancements of the canal corridor.	✓
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater. The effect of water quality and quantity from developing this site is uncertain. This is due to the proximity of the site to the canal and the potential for adverse effects from run-off.	?
3	Flood risk	Part of the site is located in flood zones 2 and 3a and there would therefore be a flood risk for new development and potentially exacerbated flood risk elsewhere. Residential development could be located away from the highest flood risk zone.	✘
4	Climate change	Although there is a steep gradient to access some local amenities including the school, the site is located close to the village and has direct and level access to the railway station. This could encourage cycling and walking rather than use of the car, which would help reduce the growth in greenhouse gas emissions. The site also has a frequent bus service.	✓
5	Air Quality	Although there is a steep gradient to access some local amenities including the school, the site is located close to the village and has direct and level access to the railway station. This could encourage cycling and walking rather than use of the car, which would help reduce the growth in airborne emissions. The site also has a frequent bus service.	✓
6	Soils	The majority of the site is greenfield, with some previously developed land. Development would therefore result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	✘
7	Resource efficiency	The site lies within the Hertfordshire Mineral Consultation Area due to its presence in the sand and gravel belt.	?
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of the site would extend Kings Langley to the north in a partly undeveloped area. The site adjoins the canal corridor and so development of the currently undeveloped part of this site could have adverse effects on the canal frontage.	✘
		The removal of the current low-grade buildings, which cover a small part of the site, will help improve the local townscape by providing improved visual amenity. The site is of low susceptibility to landscape change.	✓
10	Health and wellbeing	Although there is a steep gradient to some local amenities, this site would provide opportunities for open space, and encourage walking and cycling. There is also the potential for a new play area, riverside park, footpath links and canalside improvements which	✓

SA Objective		Rectory Farm	
		could also contribute towards improved health and wellbeing. Good level access to local facilities could also encourage walking and cycling.	
11	Sustainable locations	Although there is a steep gradient to access some local amenities including the school, the site is located close to the village and is in reasonable proximity to the railway station. This could encourage cycling and walking rather than use of the car.	✓
12	Community cohesion	Development of this area would result in removal of unattractive buildings which would improve the local environment. By providing additional housing and contributions towards wider infrastructure improvements for the village, development at this site could help to maintain community vibrancy and vitality. The site is of a scale that could deliver new facilities such as a primary school and a riverside park.	✓
13	Housing	Development of this site would provide new housing (c.200 dwellings), .	✓
14	Sustainable prosperity	Development would result in the loss of local enterprise.	✗
		The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Development would result in the loss of local employment opportunities.	✗
		Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Land adjacent to Coniston Road (H/18), Kings Langley

SA Objective		Land adjacent to Coniston Road (formerly H/18)	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site is located close to Kings Langley Common Local Wildlife Site.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	This site is located relatively close to the town centre, though the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in greenhouse gas emissions.	x
		The site is close to both primary and secondary schools which would minimise the amount of traffic generated at peak periods. The site is also served by a frequent bus service.	✓
5	Air Quality	This site is located relatively close to the town centre, though the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of airborne emissions. However, the site is close to both primary and secondary schools which would minimise the amount of traffic generated at peak periods.	x
		The site is close to both primary and secondary schools which would minimise the amount of traffic generated at peak periods. The site is also served by a frequent bus service.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of this greenfield site would affect landscape quality at a site with high landscape sensitivity.	x
10	Health and wellbeing	Part of the site is currently made up of amenity land which would be lost in the development.	x
		The site is located close to King's Langley high street which could encourage sustainable modes of travel and development would include some new open space.	✓
11	Sustainable locations	This site is located relatively close to the high street and is in close proximity to both primary and secondary schools and is served by public transport.	✓
12	Community cohesion	No predicted effects.	-

SA Objective		Land adjacent to Coniston Road (formerly H/18)	
13	Housing	This development would provide 10 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services, maintaining their viability and boosting the local economy.	✓
15	Employment and Skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention, though with a development at this scale the effects would be minor.	✓

E.6 Markyate Sites

Site Reference: South of London Road, Markyate

SA Objective		South of London Road	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	x
		Development of the site may provide the opportunity for environmental enhancements of the canal corridor.	✓
2	Water	The effect on water quality and quantity from developing this site is uncertain. This is due to the proximity of the site to the River Ver and the potential for adverse effects from run-off.	?
3	Flood risk	The north-eastern part of the site is located in flood zones 3a and 3b associated with the River Ver and there would therefore be a flood risk for new development. However, the majority of the site is in the lower risk flood zone 1. There is a high probability of fluvial flooding in this location and it is in an area at risk of reservoir flooding. Residential development could be located away from the highest flood risk zone, however access to the site would likely require a new bridge to be provided over the River. A significant adverse effect has been identified.	xx
4	Climate change	The site is located a reasonable distance from the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of greenhouse gas emissions.	?
5	Air Quality	The site is located a reasonable distance from the village centre and the route is relatively flat, which makes it feasible for walking and cycling to access the village. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of airborne emissions.	?
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	The site is located very close to the Chilterns AONB and development could affect the setting of the AONB. Development would extend Markyate into the countryside and would have a potential impact on the Ver Valley, being in a prominent location. The site has low-medium susceptibility to landscape change.	x
10	Health and wellbeing	Development of this site provides the potential for new open space as well as new footpaths and potential contributions to leisure facilities. The site is located a reasonable distance from the village centre, however the route is relatively flat, which makes it feasible for walking and cycling to access the village.	✓

SA Objective		South of London Road	
		The site is located close to the A5183 which may be a source of noise pollution.	x
11	Sustainable locations	This site's location provides good access to local facilities in the village.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, development at this site could help to maintain community vibrancy and vitality. The development could also include a new parkland.	✓
13	Housing	Development of this site would provide new housing (c.150 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Site Reference: Hicks Road/High Street, Markyate

SA Objective		Hicks Road/ High Street	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	A small part of site in within flood zones 2. The site is at a higher risk of surface water flooding.	?
4	Climate change	The site is located within the village, close to local facilities, which could encourage use of sustainable modes of transport. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of greenhouse gas emissions.	?
5	Air Quality	The site is located within the village, close to local facilities, which could encourage use of sustainable modes of transport. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of airborne emissions.	?
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is wholly within Markyate Conservation Area, although with careful design its re-development offers an opportunity to improve the quality of this area. The site also overlaps with “Medieval setting of Markyate” Area of Archaeological Significance and is close to a number of Grade II Listed Buildings. Effects against this objective are uncertain.	?
9	Landscape / Townscape	Development of this site has the potential to improve the local villagescape.	✓
10	Health and wellbeing	The site’s location close to local amenities could encourage active travel.	✓
		The site is located close to the A5183 which may be a source of noise pollution.	✗
11	Sustainable locations	The site is located within the village, close to local facilities.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	This development would provide 13 dwellings.	✓
14	Sustainable prosperity	The provision of additional housing should help support the local economy, though the effects will be minor due to the small development size. There will also be the small loss of provision of local jobs at the site.	?
15	Employment and Skills	Development of this site would result in the loss of a small existing employment area.	✗

Site Reference: Watling Street, Markyate

SA Objective		Watling Street (r/o Hicks Rd and High St)	
1	Biodiversity	Development on the site may result in the loss of some trees.	?
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located within the village, close to local facilities, which could encourage use of sustainable modes of transport. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of greenhouse gas emissions.	?
5	Air Quality	The site is located within the village, close to local facilities, which could encourage use of sustainable modes of transport. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of airborne emissions.	?
6	Soils	The site makes use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The western site boundary has some overlap with “Medieval setting of Markyate” Area of Archaeological Significance.	?
9	Landscape / Townscape	Development of this site could improve the quality of the local villagescape.	✓
10	Health and wellbeing	The site’s location close to local amenities could encourage active travel.	✓
		The site is located close to the A5183 which may be a source of noise pollution.	✗
11	Sustainable locations	The site is located within the village, close to local facilities.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	This development would provide 20 new dwellings.	✓
14	Sustainable prosperity	The provision of additional housing should help support the local economy. However, there will also be the small loss of provision of local jobs at the site.	✓
15	Employment and Skills	Development of this site would result in the loss of a small existing employment area.	✗

E.7 Countryside Sites

Site Reference: CY01 Upper Bourne End/ Stoney Lane

SA Objective		Upper Bourne End/ Stoney Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats.	x
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	Expansion of the employment area may result in more people travelling by car to access the site which is at a distance from residential settlements. This would result in an increase in greenhouse gas emissions.	x
5	Air Quality	Expansion of the employment area may result in more people travelling by car to access the site which is at a distance from residential settlements. This would result in an increase in airborne emissions.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	The development would extend the existing employment area into open countryside.	x
10	Health and wellbeing	No predicted effects.	-
11	Sustainable locations	The site is located at a distance from existing settlements. The location does not support this objective.	x
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-
14	Sustainable prosperity	Expansion of the employment area will have positive effects for the local economy. The site would provide 4,400 sqm of employment space, therefore a significant positive has been identified.	✓✓
15	Employment and Skills	Expansion of the employment area will have positive effects in relation to new job provision. The site would provide 4,400 sqm of employment space, therefore a significant positive has been identified.	✓✓

Site Reference: CY02 Bovingdon Brickworks

SA Objective		CY02 Bovingdon Brickworks	
1	Biodiversity	The site is in close proximity to a wildlife site (Pocketsdell Lane). The Eastern part of the former brick storage area will be returned to countryside, which could result in benefits for biodiversity.	?
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	Expansion of the employment area may result in more people travelling by car to access the site. This would result in an increase in greenhouse gas emissions.	x
5	Air Quality	Expansion of the employment area may result in more people travelling by car to access the site. This would result in an increase in airborne emissions.	x
6	Soils	Although the site has Grade 2 soils, the area of the site where expansion would take place is previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	No predicted effects. The site is already in use as an industrial site, so the development is not expected to negatively impact the existing landscape.	-
10	Health and wellbeing	No predicted effects.	-
11	Sustainable locations	The site is located at a distance from existing settlements. The location does not support this objective.	x
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-
14	Sustainable prosperity	Expansion of the employment area will have positive effects for the local economy. The site would provide 8,000sqm of employment space, therefore a significant positive has been identified.	✓✓
15	Employment and Skills	Expansion of the employment area will have positive effects in relation to new job provision. The site would provide 8,000sqm of employment space, therefore a significant positive has been identified.	✓✓

Site Reference: CY03 Watling Street Truck Stop

SA Objective		CY03 Watling Street Truck Stop	
1	Biodiversity	The area around the existing truck stop is greenfield land and so there would therefore be loss or damage of some habitats from any expansion. However there is a requirement to deliver new tree-planting and woodland copse on land to the east of the existing filling station.	✘
2	Water	Development could cause adverse effects on the water quality of the Rive Ver.	?
3	Flood risk	Part of the site is in a Flood Risk Zones 2 and 3. New development will need to avoid and mitigate current and potential future increased flood risk.	✘
4	Climate change	No predicted effects.	-
5	Air Quality	Increases in localised HGV movements which would result from the development could result in reductions in air quality in the vicinity of the truck stop.	?
6	Soils	The expansion of the truck stop would take place on greenfield land, resulting in soil sealing.	✘
7	Resource efficiency	No predicted effects.	-
8	Historic environment	New development could have adverse effects on the setting of the nearby Listed Building (Chequers).	?
9	Landscape / Townscape	The development would extend the existing truck stop into open countryside.	✘
10	Health and wellbeing	Increased HGV movements could result in noise disturbance issues for local residents. Improved welfare facilities for commercial drivers would have benefits against the wellbeing objective.	?
11	Sustainable locations	No predicted effects.	-
12	Community cohesion	No predicted effects.	-
13	Housing	No predicted effects.	-
14	Sustainable prosperity	Expansion of the truck stop should support the local economy.	✓
15	Employment and Skills	Expansion of the truck stop should provide additional employment opportunities.	✓

Site Reference: CY04 Haresfoot Campus

SA Objective		CY04 Haresfoot Campus	
1	Biodiversity	No predicted effects.	-
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	No predicted effects.	-
5	Air Quality	No predicted effects.	-
6	Soils	This is a greenfield site. Effects on soils will be dependent on the type and scale of new facilities provided.	?
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site lies within the Haresfoot Locally Registered Park and Garden and is adjacent to an Area of Archaeological Significance associated with 'Peterborough type urn found at Chesham Road'. Effects will be dependent on the type and scale of new facilities provided.	?
9	Landscape / Townscape	Effects on the local landscape will be dependent on the type and scale of new facilities provided.	?
10	Health and wellbeing	The development would be required to provide sports facilities of equivalent or better quantity and quality to those which would be replaced at Haslam Playing Fields.	✓
11	Sustainable locations	The site is located at a distance from existing settlements. The location does not support this objective.	✗
12	Community cohesion	The provision of new/enhanced sport and leisure facilities could be beneficial to the local community if these facilities are open for use by the public or local sports clubs.	?
13	Housing	No predicted effects.	-
14	Sustainable prosperity	No predicted effects.	-
15	Employment and Skills	No predicted effects.	-

Site Reference: CY05 Amaravati Buddhist Monastery

SA Objective		Amaravati Buddhist Monastery	
1	Biodiversity	Close to St Margaret's Copse Wildlife Site, however as no intensification of use or expansion into the rural parts of the site is proposed no effects are predicted.	-
2	Water	No predicted effects.	-
3	Flood risk	No predicted effects.	-
4	Climate change	No predicted effects.	-
5	Air Quality	No predicted effects.	-
6	Soils	This proposal involves replacing existing buildings, on the same built footprint, thereby making use of previously developed land.	✓
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is close to Listed Buildings and the re-development will need to take this into account when designing the replacement buildings.	?
9	Landscape / Townscape	The site is within the Chilterns AONB. Existing landscaping is to be retained and as appropriate enhanced. The design, layout and size of the redevelopment will need to take this into account to ensure that adverse effects on this designation are minimised.	?
10	Health and wellbeing	No predicted effects.	-
11	Sustainable locations	No predicted effects.	-
12	Community cohesion	The continued use and modernisation of this site for monastic purposes supports this objective.	✓
13	Housing	No predicted effects.	-
14	Sustainable prosperity	No predicted effects.	-
15	Employment and Skills	No predicted effects.	-

Appendix F Assessment of Sites not Included in the Draft Local Plan

Each site has been assessed against the objectives in the SA Framework (see Appendix A).

For each site an assessment has been undertaken, with each 'Site versus SA objective' relationship being 'scored' using the significance criteria shown in the table below. The assessment scoring is supported by an assessment commentary to provide the rationale behind the score allocated.

Significance Assessment	Description
✓✓	The option is likely to have a significant positive effect
✓	The option is likely to have a positive effect which is not significant
?	Uncertain – It is uncertain how or if the option impacts on the SA/SEA objective
–	Neutral – The option is unlikely to impact on the SA/SEA objective
x	The option is likely to have a negative effect which is not significant
xx	The option is likely to have a significant negative effect

F.1 Hemel Hempstead Sites

Site Reference: Fields End Farm, Hemel Hempstead

SA Objective		Fields End Farm	
1	Biodiversity	Approximately half of the site is greenfield and there would therefore be loss or damage of some habitats.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located some distance from the town centre which might discourage walking and cycling, so there could be an increased use of the car and growth in the level of greenhouse gas emissions. The site does have reasonably good access to public transport.	x
5	Air Quality	This site is located a distance from the town centre, which might discourage walking and cycling, so there could be an increased use of the car which would increase levels of airborne emissions. The site does have reasonably good access to public transport.	x
6	Soils	Approximately 50% of the site is made up of previously developed land.	✓
		Development of the greenfield portion of this site would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of the site would extend Hemel Hempstead into open countryside at a site with moderate landscape sensitivity.	x
10	Health and wellbeing	Development will include some public open space and amenity space which could be used for recreation.	✓
		The site is located at a distance from the town centre, which could discourage walking and cycling.	x
11	Sustainable locations	The site is located some distance from the town centre but does have reasonably good access to public transport.	✓

SA Objective		Fields End Farm	
12	Community cohesion	The site is of a scale that new community facilities could be included in the development, including a new primary school, however no such facilities are currently proposed and this would impact upon the ability of the site to deliver housing.	?
13	Housing	Development of this site would provide c.150 dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓
		The development would result in the removal of some business premises that are in active use, which may result in some job losses.	x

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. Access is a key constraint to this site, and would likely be dependent on new links to be provided via the adjacent Local Allocation 3, rather than enhancements to the existing local road network (i.e. Fields End Lane). Officers consider that the site, in isolation, does not relate particularly well to the existing settlement pattern of Hemel Hempstead, but recognise that a more comprehensive scale of development could be considered with the parcel to the east (Site 63: Fields End Lane). There are a number of existing businesses in operation within and adjacent to the site, with a reasonable prospect that they can be retained in the future. For these reasons, officers consider that, on balance, there are more suitable sites elsewhere which can better deliver the strategy of the new Local Plan.

Site Reference: Fields End Lane, Hemel Hempstead

SA Objective		Fields End Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site is enclosed by mature tree belts which are likely to be rich in biodiversity.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. Site is shown to be at low risk of flooding from all sources.	-
4	Climate change	This site is located some distance from the town centre which could result in increased car use and growth in the level of greenhouse gas emissions. The site does have reasonably good access to public transport.	x
5	Air Quality	This site is located a distance from the town centre, which might discourage walking and cycling, so there could be an increased use of the car which would increase levels of airborne emissions. The site does have reasonably good access to public transport.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development of the site would extend Hemel Hempstead into open countryside. The site has moderate-high susceptibility to landscape change.	x
10	Health and wellbeing	Development will include some public open space and amenity space which could be used for recreation.	✓
		The site is located at a distance from the town centre, which could discourage walking and cycling.	x
11	Sustainable locations	The site is located some distance from the town centre but does have reasonably good access to public transport.	x
12	Community cohesion	The site is of a scale that new community facilities could be included in the development, including a new primary school, however no such facilities are currently proposed and this would impact upon the ability of the site to deliver housing.	?
13	Housing	Development of this site would provide c.200 dwellings.	✓

SA Objective		Fields End Lane	
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. Access is a key constraint to this site, and would likely be dependent on new links to be provided rather than enhancements to the existing local road network (i.e. Fields End Lane). Officers consider that the site, in isolation, does not relate particularly well to the existing settlement pattern of Hemel Hempstead, separated by an established woodland belt, but recognise that a more comprehensive scale of development could be considered with the parcel to the west (Site 62: Fields End Farm). Officers consider that, on balance, there are more suitable sites elsewhere which can better deliver the strategy of the new Local Plan.

Site Reference: Polehanger Lane, Hemel Hempstead

SA Objective		Polehanger Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. Dell Wood Local Wildlife Site is adjacent to the eastern part of the site is a designated area of ancient woodland.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. There are a number of flowpaths through the site which are likely to be associated with a watercourse, but the site is at low risk of flooding.	-
4	Climate change	The site is located close to the local centre of Gadebridge, which could encourage walking and cycling to access local facilities instead of use of the car. However, there could be increased car use for accessing facilities and services outside of the local centre which would increase the growth of greenhouse gas emissions. The site does have reasonably good access to public transport.	?
		The development would be large enough for district heating opportunities to be explored.	✓
5	Air Quality	The site is located close to the local centre of Gadebridge, which could encourage walking and cycling to access local facilities instead of use of the car. However, there could be increased car use for accessing facilities and services outside of the local centre which would increase the growth of airborne emissions. The site does have reasonably good access to public transport.	?
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	Development of this site could have an impact on a listed building approximately 175 metres to the west of the site (" <i>Boxted Dairy Farmhouse Berkhamsted Rd</i> ").	?
9	Landscape / Townscape	Development of the whole of this site is likely to impact upon the setting of the Chilterns AONB due to its proximity to the west of the site. Development of the site would extend Hemel Hempstead into open countryside. The site has moderate-high susceptibility to landscape change.	x
10	Health and wellbeing	Development will include some public open space and amenity space which could be used for recreation.	✓

SA Objective		Polehanger Lane	
		The site is located at a distance from the town centre, which could discourage walking and cycling.	x
11	Sustainable locations	The site is located close to a local centre and has reasonably good access to public transport.	✓
12	Community cohesion	Development of this scale has the potential for a new local centre, primary school and possibly a secondary school, as well as contributions to the local services such as GPs and green space. Land for a new primary school is proposed as part of this site.	✓
13	Housing	Development of this site would provide c.800 dwellings. A significant positive effect has been identified.	✓✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. Officers agree with the AECOM Site Assessment Study recommendation that the eastern part of the site is unsuitable for development due to the presence of Local Wildlife Sites and Ancient Woodland. Excluding this area also prevents development from encroaching on the Gade valley and its many landscape and heritage assets. The impact on the setting of the listed building to the west of the site is likely to be mitigated through careful design and masterplanning. Officers consider that while the site performs well in general, on balance, there are other sites which are more suitable to deliver the strategy of the new Local Plan, including the potential to maximise sustainable transport modes and the delivery of new infrastructure to meet existing and future needs.

Site Reference: Shendish Manor, Hemel Hempstead (parish of Kings Langley)

SA Objective		Shendish Manor	
1	Biodiversity	The development would result in the loss of greenfield land and areas of woodland which have some biodiversity value.	✘
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. A number of flowpaths cross the site but the site is at low risk of flooding.	-
4	Climate change	The site is close to Apsley local centre and has good access to public transport which could decrease the need to travel by car and reduce the level of growth in greenhouse gas emissions. The development would be large enough for district heating opportunities to be explored.	✓
5	Air Quality	The site is close to Apsley local centre and has good access to public transport which could decrease the need to travel by car and reduce growth in airborne emissions.	✓
		Development at this location could increase congestion on London Road with associated implications for local air quality. An Air Quality Management Area (AQMA) was designated in 2011 for part of London Road near to Apsley local centre and additional traffic created by the development at Shendish is likely to add to existing problems.	✘
6	Soils	The site is greenfield and development here would result in soil sealing.	✘
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	Development may affect the setting of the nearby Shendish Manor Locally Listed Park and Garden and a number of nearby Grade II Listed Buildings. The site is partly within an Area of Archaeological Significance and may contain heritage assets of archaeological interest.	?
9	Landscape Townscape	/ Development at this location would extend Hemel Hempstead into the countryside and reduce the gap between Hemel Hempstead and Rucklers Lane. Development of the site would have a visual impact on the landscape of the Gade Valley, although the retention of the golf course (although smaller in size than the current course) would help to reduce these effects. There would also be an impact on the parkland setting of Shendish Manor. The site has high susceptibility to landscape change.	✘

10	Health and wellbeing	The site is close to the railway line which could result in noise levels affecting health and well-being. The site's location close to local amenities could encourage active travel, though access to the public right of way paths that cross the site may be affected by the development.	?
		Development will include some public open space and amenity space which could be used for recreation.	✓
11	Sustainable locations	Aspley railway station is close to the site and it is within reasonable distance of facilities and amenities.	✓
12	Community cohesion	A site of this scale has potential to contribute to community facilities including a new local centre and primary school with the possibility for a secondary school. Land for a new primary school is proposed as part of the site.	✓
13	Housing	Development of this site would provide c.550 dwellings. A significant positive effect has been identified.	✓✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	The golf course and associated buildings are in active economic use and development here may result in some job losses.	?

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified criteria, with the majority of identified constraints likely to be sufficiently mitigated alongside development, and the site's close proximity to Apsley station is seen as a significant positive. Officers remain concerned about how safe site access can be provided over the railway line or onto the Rucklers Lane. While a technical solution may be achievable for this, the impact that development of this site may have on the local and strategic road network could be significant, particularly with respect to the Air Quality Management Areas to the north of the site and Junction 20 of the M25 to the south. The delivery of new on site infrastructure such as a school could exacerbate these concerns. A smaller scale of development may address a number of these issues, however officers consider that, on balance, there are more suitable sites in the area which can better deliver the strategy of the Local Plan.

Site Reference: Pouchen End Lane, Hemel Hempstead

SA Objective		Pouchen End Lane	
1	Biodiversity	The site is entirely greenfield and contains an area of Ancient Woodland and Local Wildlife Site.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3. There are a number of flowpaths crossing the site but the site is at low risk of flooding.	-
4	Climate change	This site is located some distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions.	x
5	Air Quality	This site is located some distance from the town centre and the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and airborne emissions.	x
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The south of the site is close to the Bourne End Conservation Area and development may affect the setting of the Grade II Listed Building in close proximity to the site.	?
9	Landscape / Townscape	The site is adjacent to the Chilterns AONB and development here would affect the setting of the AONB and extend Hemel Hempstead into open countryside, eroding the gap between Hemel Hempstead and Berkhamsted. The site has high susceptibility to landscape change.	x
10	Health and wellbeing	The site's location at a distance from facilities and services may discourage active travel.	x
		Development will include some public open space and amenity space which could be used for recreation.	✓
11	Sustainable locations	The site is not currently well connected to public transport, however the development may include a new local centre which would reduce the need to travel for services and amenities.	✓

SA Objective		Pouchen End Lane	
12	Community cohesion	The site is of a scale that new community facilities could be included in the development, including a new primary school, however no such facilities are currently proposed and this would impact upon the ability of the site to deliver housing	?
13	Housing	The site would deliver 350 new dwellings.	✓
14	Sustainable prosperity	As this site should provide a large amount of additional housing, this increased number of residents in the town would make facilities and shops more viable.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services. The site also includes a local centre which could offer employment opportunities.	✓

Dacorum BC reasoning for not including in Draft Local Plan

The site performs reasonably well on a number of criteria. Officers agree with the AECOM Site Assessment Study’s conclusions that development of the whole site is likely to give rise to significant landscape and Green Belt issues, including the potential risk of coalescence with nearby settlements. Delivering suitable access to the site is likely to be dependent on the delivery of the adjacent Local Allocation 3 – West of Hemel, and this has an impact on when the site would be able to come forward for development. Officers have reviewed a smaller area of land to see if it could address a number of these constraints, however concerns remain that the landscape impacts (including perceived coalescence with Berkhamsted) are likely to be significant. Therefore officers consider that there are other sites which are more appropriate to meet the strategy of the new Local Plan.

Site Reference: Land south of Link Road/ West of Fletcher Way, Hemel Hempstead

SA Objective		Land south of Link Road/ West of Fletcher Way	
1	Biodiversity	The site is greenfield and contains hedgerows which are rich in biodiversity. Adjacent to the site is a Local Wildlife Site and Local Nature Reserve.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site's location close to Highfield amenities could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions. There are good public transport links in to Hemel Hempstead.	✓
5	Air Quality	The site's location close to Highfield amenities could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions. There are good public transport links in to Hemel Hempstead.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site lies between Hemel Hempstead Conservation Area and Piccotts End Conservation Area and is adjacent to an area of archaeological significance. Development here may affect the setting of the conservation areas and the many Grade II Listed Buildings which lie within them.	?
9	Landscape / Townscape	Development here would erode the gap between Piccotts End and Hemel Hempstead and the site is considered to have moderate-high landscape susceptibility.	x
10	Health and wellbeing	Development here may disrupt access to the public rights of way which run through the site, though the site is close to open space and woodland which could be used for recreation.	?
11	Sustainable locations	The site is located in close proximity to a local centre and reasonably close to the town centre of a main settlement. The site's location could allow local people to live near to their work and there are good public transport links in to Hemel Hempstead.	✓
12	Community cohesion	The site is of a scale that there is potential to contribute to community facilities.	✓

SA Objective		Land south of Link Road/ West of Fletcher Way	
13	Housing	The development would deliver c.150 dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. A key constraint for this site is in relation to landscape sensitivities and its location within the important open gap separating the two Conservation Areas of Hemel Hempstead (Old Town) and Piccotts End. The scale of the site limits the opportunities for sufficient landscape mitigation to offset the sensitivities and maintain both a visual and perceived separation between Hemel Hempstead and Piccotts End, particularly with views from the west. Officers consider that, on balance, there are other sites which are more suitable to delivering the strategy of the new Local Plan.

Site Reference: Red Lion Lane, Hemel Hempstead

SA Objective		Red Lion Lane	
1	Biodiversity	Development may affect the Local Wildlife Site which is adjacent to the west.	?
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	Revised flood mapping in the area has resulted in only a small area of land on the south western boundary falling within Flood Zone 3. The site is at high risk of surface water flooding.	?
4	Climate change	The site's location close to Apsley and Hemel Hempstead amenities could encourage use of sustainable modes of travel to access facilities. This could reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site's location close to Apsley and Hemel Hempstead amenities could decrease the need to travel by car to access facilities and reduce the level of growth in airborne emissions.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. Part of the site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The development may affect the setting of Abbots Hill which is of local value as a heritage asset and a number of Grade II Listed Buildings which are in the area around the site.	?
9	Landscape / Townscape	The site has low susceptibility to landscape change and the development of the car park land may improve local landscape.	?
10	Health and wellbeing	Development here would result in a loss of designated open space which could be used for recreation, but some of this would be retained as part of the development.	?
11	Sustainable locations	The site is close to an existing settlement and transport links.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	The development would deliver c.50 new dwellings.	✓

SA Objective		Red Lion Lane	
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓

Dacorun BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified criteria, with the majority of identified constraints likely to be sufficiently mitigated through development. Flood risk is a particular constraint to development of this site. The flood maps for this area have been updated since the Site Assessment Study was completed, and demonstrates that while fluvial flood risk has decreased (i.e. Flood Zones 2 and 3), surface water flooding remains an issue for the vast majority of the site. Sequentially, officers consider that there are more appropriate sites outside of the built up area of the six main settlements that are capable of delivering the strategy, and therefore is not recommended as an allocation.

F.2 Berkhamsted sites

Site Reference: Land East of Berkhamsted

SA Objective		Land East of Berkhamsted	
1	Biodiversity	The site is greenfield and there would therefore be loss or damage of some habitats. The site is adjacent to a designated Local Wildlife Site (Long Green).	x
		Development at this large site would provide the opportunity to include a Suitable Alternative Natural Greenspace (SANG) area which could deliver local biodiversity enhancements as well as providing the potential to reduce recreational pressure on the Chilterns Beechwoods SAC, particularly at Ashridge Estate.	✓
2	Water	Any development close to the river and in the floodplain could result in adverse effects on water quality. Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	To the north of the London Road, the northern edge of the site is in flood risk zone 2 and 3. The River Bulbourne (Flood Zone 2 and 3) passes through the northern section of this site (north of London Road), from west to east. There is a high probability of fluvial flooding in this location and is in an area at risk of reservoir flooding, though this area would be designated as open space with no residential development in the Flood Zone. No residential development is proposed on land north of the London Road. Development of land to the south of the London Road would be outside of any area of Flood Zone 2 and 3, and is at low risk of flooding from all sources.	?
4	Climate change	This site is located reasonably close to the town centre though the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of greenhouse gas emissions. In addition, the scale of development at this site gives rise to opportunities for local employment, however it is likely that many new residents will commute to other towns/areas for work. Whilst the site is situated within 2km of the railway station there remains the likelihood that a high proportion will commute to work or make their journey by private car.	x
		The development would be large enough for district heating opportunities to be explored.	✓
5	Air Quality	This site is located reasonably close to the town centre but has a steep gradient which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions. Whilst these factors would help to reduce the growth in airborne emissions, nevertheless the increased traffic resulting from the large	?

SA Objective		Land East of Berkhamsted	
		number of new dwellings associated with the new development could contribute towards reduced air quality in the town.	
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is located within the Brick Clay Mineral Safeguarding Area, which could have implications for safeguarding mineral reserves.	?
8	Historic environment	<p>The north-western corner of the site abuts the Berkhamsted Conservation Area.</p> <p>Part of the south-eastern area of the site is located in an Area of Archaeological Significance (DAC-53 'Late pre-Roman Iron Age & Roman settlement activity found nearby').</p> <p>The County Archaeologist has identified that there is potential that archaeological remains are present in the area between the A41 and Berkhamsted, including the possibility of nationally important remains that may be worthy of preservation <i>in situ</i>. Archaeological assessment would therefore be required before the submission of a planning application.</p> <p>The eastern part of the wider site is in close proximity of the historic core of Bourne Village, which containing a number of listed buildings. This reduces the development potential of the whole. Development of the site has the potential to impact upon a number of Grade II listed buildings in the area.</p>	?
9	Landscape / Townscape	<p>Development of this site would expand Berkhamsted into prominent open countryside to the east of the town, eroding the gap with Bourne End. It would also impact on the Green Gateway into the town.</p> <p>Development could also affect the setting of the Chilterns AONB which is located on the opposite valley side. The site has high susceptibility to landscape change. Given the scale of the development at this site, a significant adverse effect has been identified.</p>	xx
10	Health and wellbeing	<p>The site is located at a steep gradient from the town centre, which could discourage walking and cycling. This would particularly be the case for the southern part of the site which is furthest from the town centre and with a gradient.</p> <p>The site is located near the A41 which could result in noise levels that could affect health and wellbeing.</p>	x
		The development will include an area of open land which could be used for recreation.	✓

SA Objective		Land East of Berkhamsted	
11	Sustainable locations	There is a local centre planned as part of the development which will meet some day to day needs and help reduce the need to travel. In addition the development could provide a new bus loop which could be used by new and existing residents and provide opportunities to avoid car use. The development could also improve bus patronage for existing services and support their viability.	✓
12	Community cohesion	A local centre is planned which would provide new infrastructure (e.g. school and healthcare facilities) which will meet some day to day needs as well as taking pressure off existing local services and infrastructure. By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide a large amount of new housing (c.1,000).	✓✓
14	Sustainable prosperity	As the development of this site should provide a large amount of additional housing, this increased number of residents in the town would make facilities and shops more viable. Development at this location could provide some small business units.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services. The site also includes a local centre which could offer employment opportunities.	✓

Dacorum BC reasoning for not including in Draft Local Plan

The site suffers from a number of constraints, principally relating to Green Belt and landscape sensitivities including the potential for development to impact the setting of the Chilterns. Development of the whole of the site would erode the important open gap separating Berkhamsted with Bourne End village and with Hemel Hempstead. Officers considered a smaller scale of growth which would reduce the impact on a number of these issues, however additional evidence has concluded that landscape sensitivity remains high. In reviewing proposed mitigation measures for the site, officers are not confident that a smaller scale of development will result in a less than significant impact on the immediate and wider landscape including the setting of the Chilterns AONB. Officers have given serious consideration to the sustainability merits of the site, including the potential to deliver significant new infrastructure such as new education provision, a new community hub, public open space, potential new sports/leisure facilities and a new link road linking London Road with the A416 (via site 2: South of Berkhamsted). Currently officers do not consider the merits of the site outweigh the impact that development would have on landscape, particularly the setting of the CAONB and in terms of the impact development would have on the role and function of the Green Belt in this location, eroding the gap between the settlements of Berkhamsted and Hemel Hempstead; both of which would be significant. On balance, officers consider there are more appropriate sites elsewhere which can deliver the strategy and which will not give rise to such significant impacts.

Site Reference, Ivy House Lane, Berkhamsted

SA Objective		Ivy House Lane	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats. There are TPOs in place on the site.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located at a distance from the town centre which would discourage walking and cycling. Its location on a valley side would also make walking and cycling difficult. The site has poor accessibility to local facilities, especially primary schools. This could all mean that the use of the car would increase, giving an increase in greenhouse gas emissions. Buses do however run within 300m of the site which would enable the use of public transport and the railway station is relatively close to the site.	x
5	Air Quality	The site is located at a distance from the town centre which would discourage walking and cycling. Its location on a valley side would also make walking and cycling difficult. The site has poor accessibility to local facilities, especially primary schools. This could all mean that the use of the car would increase and there could therefore be adverse effects on air quality from vehicle emissions. Buses do however run within 300m of the site which would enable the use of public transport.	x
6	Soils	This site is greenfield land, and development would result in soil sealing. The site is on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	Development may affect the setting of the Grade II Listed Buildings close to the site.	?
9	Landscape / Townscape	Development of this prominent site would expand Berkhamsted into countryside on the eastern edge of the town. The site is also immediately adjacent to the Chilterns AONB and therefore its development could impact on the setting of the AONB. The site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	Although the site is located within 1km from the railway station and 1.25km from the town centre its location on a valley side may discourage residents from walking and cycling.	x
		It is proposed that the development would provide new open space which would have benefits for both the new and existing population of the local area.	✓

SA Objective		Ivy House Lane	
11	Sustainable locations	The site is at a distance from the town centre, primary schools and local shops. It is not well served by public transport.	x
12	Community cohesion	The site is at a distance from the town centre services and facilities. The site has poor accessibility to local facilities, especially primary schools.	x
		By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.100 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs reasonably well on a number of constraints, most of which are likely to be addressed through appropriate mitigation. A key constraint to development in this location is in respect to safe site access from Ivy House Lane, however a technical solution is likely to be feasible from other local roads in the area. Spatially, the site is distant from other sites which have the potential to deliver significant new infrastructure such as new schools and community hubs, important to delivering the strategy for Berkhamsted. For these reasons, officers consider that there are more appropriate locations in Berkhamsted which are capable to delivering the strategy.

F.3 Tring sites

Site Reference: South of Gammel Farm, Bulbourne Road, Tring

SA Objective		South of Gammel Farm, Bulbourne Road	
1	Biodiversity	The site is greenfield and has some biodiversity value. The Tring Reservoir SSSI is 350m from the site, though development is unlikely to affect this.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located a distance from the town centre and employment opportunities. This could increase the use of the car to access town centre facilities and services and employment, thereby increasing the growth of greenhouse gas emissions. greenhouse gas	x
		The site is located reasonably close to a local shop, schools and the railway station, and there are existing cycle links to both the station and the town. The impact on greenhouse gas emission increases would depend on these sustainable options being taken up.	✓
5	Air Quality	This site is located a distance from the town centre, which would discourage walking and cycling, so there could be an increased use of the car and growth in the level of airborne emissions.	x
		There are existing cycle links to the station and town centre which could encourage more sustainable travel. The effect on air quality depends on these sustainable options being taken up.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	The development would extend Tring into open countryside and may affect the setting of the Chilterns AONB to which it is adjacent. The site is of moderate susceptibility to landscape change.	x
10	Health and wellbeing	The development will include provision for new open space.	✓
11	Sustainable locations	The site is located at a distance from the town centre, however the site is also located relatively close to a local shop and schools.	✓

SA Objective		South of Gannel Farm, Bulbourne Road	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the town, development at this site could deliver additional community facilities for Tring and could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.40 dwellings), .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the town, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs reasonably well with respect to a number of identified criteria. Parts of the site are exposed to wider views however officers consider that these impacts are much smaller when compared to alternative sites, and can be appropriately mitigated. The site is unlikely to deliver any substantial infrastructure to serve both existing and new communities, and would only make a limited contribution towards meeting future housing needs, when compared against alternatives elsewhere in Tring. Having regard to the potential to deliver housing in the short term, officers consider that there are more suitable sites elsewhere which will help to deliver the strategy of the Local Plan.

F.4 Bovingdon Sites

Site Reference: Homefield, Bovingdon

SA Objective		Homefield	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats, although it is proposed that the old hedgerows will be retained wherever possible.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located close to the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in greenhouse gas emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
5	Air Quality	The site is located close to the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce growth in airborne emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
6	Soils	This site would result in a loss of greenfield land, and development would result in soil sealing. A small part of the site is located on Grade 2 agricultural land.	x
7	Resource efficiency	The site is within the Brick Clay Mineral Safeguarding Area which could have implications for safeguarding mineral reserves.	?
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development at this location would extend Bovingdon into countryside to the south of the village, though the site is of low susceptibility to landscape change.	x
10	Health and wellbeing	Development at this site would provide opportunities for new open space and encourage walking and cycling. Good level access to local facilities could also encourage walking and cycling.	✓
11	Sustainable locations	The level access to the village centre would enable relatively easy access to local facilities by walking and cycling.	✓

SA Objective		Homefield	
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, including the potential for new community facilities, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide 140 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing and facilities associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. While there is expected to be no technical issue to delivering access onto Green Lane, issues currently exist with on-street parking which give rise to highway safety issues and it is unclear how this could be effectively managed to ensure appropriate sight lines are achieved in addition to enhancing traffic flows at peak periods. On this basis and having regard to alternative sites in Bovingdon, officers consider there are other sites that are less constrained and offer more sustainability benefits than this site, and therefore do not recommend the site is allocated to deliver the strategy of the new Local Plan.

Site Reference: Fox Meadow, Bovingdon

SA Objective		Fox Meadow	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	?
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	The site is located close to the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in greenhouse gas emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
5	Air Quality	The site is located close to the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce growth in airborne emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 2 agricultural land and therefore a significant adverse effect has been identified against the soils objective.	xx
7	Resource efficiency	The site is within the Brick Clay Mineral Safeguarding Area which could have implications for safeguarding mineral reserves.	?
8	Historic environment	No predicted effects.	-
9	Landscape / Townscape	Development at this location would extend Bovingdon into countryside to the south of the village. The site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	Development at this site would provide opportunities for new open space and encourage walking and cycling. Good level access to local facilities could also encourage walking and cycling.	✓
11	Sustainable locations	The level access to the village centre would enable relatively easy access to local facilities by walking and cycling.	✓
12	Community cohesion	There is potential for the site to deliver some small-scale community facilities such as a new scout hut.	✓
13	Housing	Development of this site would provide c.60 new dwellings.	✓

SA Objective		Fox Meadow	
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development. While there is expected to be no technical issue to delivering access onto Green Lane, issues currently exist with on-street parking which give rise to highway safety issues and it is unclear how this could be effectively managed to ensure appropriate sight lines are achieved in addition to enhancing traffic flows at peak periods. On this basis and having regard to alternative sites in Bovingdon, officers consider there are other sites that are less constrained and offer more sustainability benefits, and therefore do not recommend the site is allocated to deliver the strategy of the new Local Plan.

Site Reference: Duckhall Farm, Bovington

SA Objective		Duckhall Farm	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3, however, there are incidents of flooding recorded by Dacorum Borough Council and Hertfordshire County Council in the vicinity of this site.	?
4	Climate change	The site is located close to the village centre, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in greenhouse gas emissions. The presence of the busy road between the site and the village centre may however discourage pedestrians and cyclists. New local facilities and enhancements to public transport connections will support this objective.	✓
5	Air Quality	The site is located close to the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce growth in airborne emissions. The presence of the busy road between the site and the village centre may however discourage pedestrians and cyclists. New local facilities and enhancements to public transport connections will support this objective.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is within the Brick Clay Mineral Safeguarding Area which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The site is adjacent to four Grade II Listed Buildings along the south western edge and may adversely affect their setting. The Listed Buildings at Duckhall Farm and Honours Farm are screened by mature hedgerows and planning permission has also been granted for the construction of additional dwellings next to the existing farm buildings, further reducing any impacts from this site.	?
9	Landscape / Townscape	Development of the site would extend Bovington into countryside to the north of the village, though a number of built structures on the adjacent HMP The Mount provides the site with a sense of enclosure from the wider landscape. The site has moderate susceptibility to landscape change.	x

SA Objective		Duckhall Farm	
10	Health and wellbeing	Development of the site could provide opportunities for new public open space and allotments. The location near to the village centre could encourage walking and cycling, although there is a busy road separating the site from the village centre which may affect the use of these active travel modes.	✓
11	Sustainable locations	This site is located near facilities with good level access to the village centre.	✓
12	Community cohesion	The site is located near HMP The Mount which could result in anxiety related to the fear of crime. Incorporating perimeter development with outward facing buildings, dual fronted properties will address corners providing surveillance over areas of open space. This type of layout supports this objective.	✗
13	Housing	Development of this site would provide c.70 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development, however careful consideration is needed to ensure that development does not impact upon the setting of Honours Farm (a listed building with open views into the site) and other heritage assets in close proximity to the site. On this basis and having regard to alternative sites in Bovington, officers consider there are other sites that are less constrained and offer more sustainability benefits, and therefore do not recommend the site is allocated to deliver the strategy of the new Local Plan.

Site Reference: South of Hempstead Road, Bovingdon

SA Objective		South of Hempstead Road	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats . The boundary consists of a mature hedgerow with trees.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zones 2 and 3 but there are recorded incidents of flooding at this site.	?
4	Climate change	The site is located close to the village centre, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in greenhouse gas emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
5	Air Quality	The site is located close to the village centre, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in airborne emissions. New local facilities and enhancements to public transport connections will support this objective.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	The site is within the Brick Clay Mineral Safeguarding Area which could have implications for safeguarding mineral reserves.	?
8	Historic environment	The southern boundary of the site shares a boundary with the Bovingdon Conservation Area, the setting of which may be affected by new development.	?
9	Landscape / Townscape	Development of the site would extend Bovingdon into countryside to the east of the village. The site has moderate susceptibility to landscape change.	x
10	Health and wellbeing	The site is located close to open space and village amenities which could encourage walking and cycling.	✓
11	Sustainable locations	This site is in a reasonable proximity to existing services and facilities on Bovingdon High Street and close to good quality public transport connections to major towns in the area.	✓
12	Community cohesion	No predicted effects.	-
13	Housing	This development would provide c.40 new dwellings,	✓

SA Objective		South of Hempstead Road	
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, many of which are likely to be sufficiently mitigated through development, however careful consideration is needed to ensure that development does not impact upon the setting of Bovingdon Conservation Area. On this basis and having regard to alternative sites in Bovingdon, officers consider there are other sites that are less constrained and offer more sustainability benefits than this site, and therefore do not recommend the site is allocated to deliver the strategy of the new Local Plan.

Site Reference: Bovingdon High Street Regeneration, Bovingdon

SA Objective		Bovingdon High Street Regeneration	
1	Biodiversity	Part of the site is greenfield land with some biodiversity value and there are TPOs in place within the site.	?
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 or 3. Parts of the site are at a higher risk of surface water flooding.	?
4	Climate change	The site is located in the centre of the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The site is located in the centre of the village, which could encourage cycling and walking rather than use of the car, thereby helping to reduce growth in airborne emissions.	✓
6	Soils	Although there is some previously developed land on the site, the site is partly greenfield and development would result in some soil sealing. The land is Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is wholly located within the Bovingdon Conservation Area, with part of the site being in an Area of Archaeological Significance (“Medieval settlement of Bovingdon, medieval site of Bury Farm”). In addition, the site contains a Grade II Listed Building (“Church Gate Church Lane House” and there are several more Grade II Listed Buildings in close proximity. The effects against this objective are uncertain.	x
9	Landscape / Townscape	Redevelopment of the existing buildings on the site may have positive impacts on the local townscape, however the loss of the more open greenfield portion of the site may impact the landscape. Impacts are uncertain.	?
10	Health and wellbeing	The development includes the provision of new open space for recreation and the accessibility of the village centre would encourage active travel.	✓
11	Sustainable locations	The level access to the village centre would enable relatively easy access to local facilities by walking and cycling.	✓
12	Community cohesion	There would be a removal of community facilities at this site, including a primary school and library, though it is intended that these facilities would be relocated elsewhere in the village or enhanced on site. Proposals include the provision of off street public parking which could enhance the local environment on the high street, making it a more attractive space for local residents to use. Success of this objective depends on the replacement of the facilities.	?

SA Objective		Bovingdon High Street Regeneration	
13	Housing	Development of this site would provide c.45 new dwellings.	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified constraints, and is well located in the centre of Bovingdon, close to other services and facilities. Development of the site is dependent on an appropriate solution to primary school education, including its relocation to a suitable location elsewhere in Bovingdon. It is unclear at this stage if a viable solution can be delivered alongside planned growth for Bovingdon and the wider borough. In the absence of such evidence, officers recommend that the site is not allocated in the new Local Plan.

F.5 Kings Langley sites

Site Reference: Hill Farm, Kings Langley

SA Objective		Hill Farm	
1	Biodiversity	The site is greenfield and there would therefore be loss of some habitats.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources.	-
4	Climate change	This site is located relatively close to the high street, but the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in greenhouse gas emissions.	x
		The site is close to both primary and secondary schools which would minimise the amount of traffic generated at peak periods. The site is also served by a frequent bus service.	✓
5	Air Quality	This site is located relatively close to the high street, but the gradient between the town centre and the site is likely to discourage walking and cycling, which could result in increased car use and growth in the level of airborne emissions.	x
		The site is close to both primary and secondary schools which would minimise the amount of traffic generated at peak periods. The site is also served by a frequent bus service.	✓
6	Soils	Development of this site would result in a loss of greenfield land and would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	Site is located within the Hertfordshire Mineral Consultation Area for brick clay resources, however Hertfordshire County Council have confirmed that the land is unlikely to come forward for mineral extraction.	?
8	Historic environment	The eastern point of the site is within the Kings Langley Conservation Area and there is a Listed Building to the east of the site (Hill Farmhouse). Development may affect the settings of these designations. The site is in the vicinity of two Scheduled Monuments and areas of archaeological significance. However, any remains are likely to be restricted to their immediate areas and are unlikely to extend into this site.	?
9	Landscape / Townscape	Development of this site would expand Kings Langley into countryside on the north-western edge of the village, though the site is of low-moderate susceptibility to landscape change.	x

SA Objective		Hill Farm	
10	Health and wellbeing	This site would provide opportunities for new open space, as well as encourage walking and cycling, which could contribute towards improved health and wellbeing.	✓
		The site would be affected by noise from the A41 which could adversely affect health and wellbeing.	✗
11	Sustainable locations	This site is located relatively close to the high street and is in close proximity to both primary and secondary schools and is served by public transport.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, as well as community facilities, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.250 dwellings) .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

Site performs well on a number of identified criteria, with the majority of identified constraints likely to be sufficiently mitigated alongside development. Access was initially identified in the AECOM Site Assessment Study as a constraint although an alternative proposal has been identified which overcomes this constraint. The site relates well to existing facilities such as primary and secondary education, but is distant from the main high street/A4251 and the train station, relative to other alternatives in the area. Officers consider that, on balance, there are more suitable sites in the area which can better deliver the strategy of the Local Plan.

Site Reference: Wayside Farm, Kings Langley

SA Objective		Wayside Farm	
1	Biodiversity	The site is mainly greenfield and there would therefore be loss of some habitats.	x
2	Water	Local upgrades to the network may be required to manage additional capacity for water and wastewater.	?
3	Flood risk	The eastern part of the site is located in flood zones 3a and 3b associated with the River Ver and there would therefore be a flood risk for new development. However, the majority of the site is in the lower risk flood zone 1. Residential development could be located away from the highest flood risk zone.	x
4	Climate change	The site is located close to the village, and is walking distance to the railway station. This could encourage cycling and walking rather than use of the car, which would help to reduce the growth in greenhouse gas emissions. The site has good public transport links and there is the possibility of enhancing these services. The proposed new local centre could further reduce the need to travel.	✓
5	Air Quality	The site is located close to the village, and is walking distance to the railway station. This could encourage cycling and walking rather than use of the car, which could reduce growth in airborne emissions. The site has good public transport links and there is the possibility of enhancing these services. The proposed new local centre could further reduce the need to travel.	✓
6	Soils	This site would result in a loss of greenfield land, and development would result in soil sealing. The site is located on Grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects. The site lies within the Hertfordshire Mineral Consultation Area due to its presence in the sand and gravel belt.	?
8	Historic environment	The site encroaches Kings Langley Conservation Area and site is close to two areas of Archaeological Significance ('Sites of royal palace & Dominican priory at King's Langley' and 'Medieval moated site of 'Little London') each containing a Scheduled Monument. The impact of any development on these heritage assets is uncertain and will need to be carefully assessed. The site is entirely within The Royal Park of the Kings Langley estate which is of local value as a heritage asset..	x
9	Landscape / Townscape	The site is located on a sensitive open valley side location and there are no physical constraints to south and west of the site to contain development. Future development in this location would result in encroachment into the countryside in this area. The site has high susceptibility to landscape change.	x

SA Objective		Wayside Farm	
10	Health and wellbeing	This site would provide opportunities for new open space and a play area, as well as encourage walking and cycling, which could contribute towards improved health and wellbeing.	✓
		The site would be affected by noise from both the M25 and the A41 which could adversely affect health and wellbeing. Access to the multiple public rights of way which cross the site may be affected.	x
11	Sustainable locations	This site's location provides good and level access to local facilities which will enable walking and cycling to access the services.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, as well as having the potential to provide a new primary school, local centre and employment land, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide a large amount of new housing (c. 400 new dwellings) .	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention. The site has potential for new employment development and so any new housing at this location would be in close proximity to any new opportunities.	✓

Dacorum BC reasoning for not including in Draft Local Plan

The site performs well on a number of criteria, including its spatial relationship to the strategic highway network, the train station and to the high street/A4251. The site however experiences a number of different constraints which do impact its development potential. The land to the east of the London Road is a Scheduled Monument which is also at higher risk of flooding. Officers agree with the AECOM Site Assessment Study that much of the land to the west of London Road is highly sensitive in landscape terms and this is backed up by the more recent Landscape Sensitivity Assessment. Land to the north of the parcel is associated with the site of the historic Royal Palace and associated park, which date from the 14th century and is likely to have significant archaeological value. Having regard to this and other alternative in the area, officers consider the site is not suitable for allocating in the new Local Plan.

F.6 Markyate sites

Site Reference: Cotton Spring Farm, Markyate

SA Objective		Cotton Spring Farm	
1	Biodiversity	Much of the site is greenfield and contains features such as hedgerows that are high in biodiversity. Development may disrupt the nearby Cheverell's Green Wildlife Site.	x
2	Water	No predicted effects.	-
3	Flood risk	The site is not in Flood Zone 2 and 3 and is at low risk of flooding from all sources, however depending on the location of new development within this site (outside of the AONB), access would be required from the adjacent site "South of London Road" and therefore would require a bridge to be provided over the River Ver. As a result of this, the effects are uncertain.	?
4	Climate change	The site is located a reasonable distance from the village centre which makes it feasible for walking and cycling to access the village. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of greenhouse gas emissions.	?
5	Air Quality	The site is located a reasonable distance from the village centre which makes it feasible for walking and cycling to access the village. The village is, however, poorly served by public transport which could result in increased car use for accessing facilities and services outside of the village which would increase the growth of airborne emissions.	?
6	Soils	There would be a loss of greenfield land which would result in soil sealing. The site is on grade 3 agricultural land.	x
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The site is adjacent to Markyate Conservation Area which contains several Grade II Listed buildings and an Area of Archaeological Interest, "Medieval settlement of Markyate".	?
9	Landscape / Townscape	The majority of the site is considered to have national landscape value as it is partly within the Chilterns AONB and development here and at Markyate Village Green would disrupt the landscape, though no housing would be built within the AONB portion of the site. The site has moderate-high susceptibility to landscape change.	x
10	Health and wellbeing	Though some will be retained, development could result in a loss of public open space which could otherwise be used for recreation, and access to the public rights of way which cross the site may be affected.	x

SA Objective		Cotton Spring Farm	
		Development of this site provides the potential for new open space as well as new footpaths and potential contributions to leisure facilities. The site is located a reasonable distance from the village centre, which makes it feasible for walking and cycling to access the village	✓
11	Sustainable locations	This site's location provides good access to local facilities in the village.	✓
12	Community cohesion	By providing additional housing and contributions towards wider infrastructure improvements for the village, development at this site could help to maintain community vibrancy and vitality.	✓
13	Housing	Development of this site would provide new housing (c.40 dwellings).	✓
14	Sustainable prosperity	The new housing should help to support the local services in the village, maintaining their viability and boosting the local economy.	✓
15	Employment and skills	Provision of the housing associated with this site could help the local economy and encourage provision of local services, thereby supporting local job creation and retention.	✓

Dacorum BC reasoning for not including in Draft Local Plan

The site performs well on a number of criteria, but there are a number of different constraints which do impact its development potential. The majority of the land is located in the AONB, which the NPPF attaches the highest status of protection. A small portion of the site is located outside of the AONB (but still within its setting) and adjoins the built up area of Markyate. Access to the site is also an issue. As officers are not recommending any development within the AONB, access is unlikely to be provided from Pickford Road, to the west of the site. It is highly unlikely that safe access could be provided from the established residential area to the north east, however a technical solution may be possible. The most credible point of access would be from the adjacent site 114 – London Road, which is also promoted for allocation in the new Local Plan, and requires a new single span bridge over the River Ver to be delivered in order to enable development. Sequentially, this site is unlikely to come forward for development in isolation and officers therefore consider that there are more suitable sites capable of delivering the strategy of the Local Plan.

F.7 New settlements

Site Reference: New Settlement - Bovingdon airfield

SA Objective		Bovingdon airfield	
1	Biodiversity	Whilst the site is mainly previously developed land it could have some biodiversity value. There are some TPOs on a small section of the northern boundary of the site.	?
		Development at this large site would provide the opportunity to include new Green Infrastructure which would have positive effects for biodiversity.	✓
2	Water	No predicted effects	-
3	Flood risk	The site is not located in a flood zone. However the site is shown to be susceptible to surface water flooding	-
4	Climate change	It is anticipated that the new settlement would provide some limited services and facilities, which given the level nature of the site would be easy to walk and cycle to. In addition the site is in relatively close proximity to Bovingdon village centre which could encourage cycling and walking to access the village's services and facilities rather than use of the car. The site is also located to local bus services. All of these would help to reduce the growth in greenhouse gas emissions.	✓
		Whilst a new settlement would be expected to provide some new services and facilities, and also taking into account the existing services and facilities in Bovingdon, there would still be a need for travel to access higher order services and facilities, for example in Hemel Hempstead and Chesham. Given the limited public transport it is likely that the majority of trips would be by private car, thereby resulting in an increase in greenhouse gas emissions.	x
5	Air Quality	Provision of some new facilities and services in the new settlement, coupled with the fact that the site is in relatively close proximity to Bovingdon village centre, would encourage cycling and walking rather than use of the car, thereby helping to reduce growth in airborne emissions in the locality.	✓
		The likelihood of increased car use to access higher order services could result in exacerbation of air quality issues in the destination towns, for example on Station Road in Hemel Hempstead.	x
6	Soils	The majority of the site is previously developed land (classified as other land primarily in non-agricultural use') and so development here would support this objective, although there are some areas of greenfield land which could be sealed by new development.	✓

SA Objective		Bovingdon airfield	
		Development of the site would provide the opportunity to remediate any contaminated land associated with its former use as an airfield and given that a historical inert landfill has been identified on-site. Such remediation would also support the achievement of this objective.	
7	Resource efficiency	No predicted effects.	-
8	Historic environment	The use of the site as an RAF and USAAF base during World War II means that it is likely to have some heritage assets associated with this former use. The site is close to four Grade II Listed Buildings along the southern and western edges and development may adversely affect their setting.	?
9	Landscape / Townscape	The site is located approximately 3km to the east of the Chilterns AONB, however the local topography and elevated position of the site means that development may affect the setting of the AONB. Development of the site would extend Bovingdon into open countryside and would close the gap between Bovingdon and Whelpley Hill.	x
10	Health and wellbeing	Development of a new settlement would provide open space and leisure facilities which would be used by new residents and existing Bovingdon residents. The level nature of the site should help to encourage walking and cycling to access local services and facilities.	✓
11	Sustainable locations	The site's location away from a major public transport corridor, including rail, means that a large majority of non-local journeys, including for work, are expected to be made by private car.	x
12	Community cohesion	The new mixed-use settlement would provide new services and community facilities, which would be of a benefit to both new and existing Bovingdon residents.	✓
13	Housing	A new settlement at this location would provide over 2,000 new dwellings, which would be expected to cover the full range of housing types as identified in the SHMAA, including affordable housing.	✓✓
14	Sustainable prosperity	Development of a new mixed-use settlement provides the potential for the provision of new local services and some new commercial development – which will help to support the local economy. In addition the provision of new housing in this area would help to support the local services in Bovingdon and the higher order services in Hemel Hempstead, maintaining their viability and boosting the local economy.	✓

SA Objective		Bovingdon airfield	
15	Employment and skills	The mixed-use development proposed for this settlement would offer some limited new local employment opportunities.	✓

Dacorum BC reasoning for not including in Draft Local Plan

The site performs well on a number of criteria, including the previously developed nature of the site. The flat, open nature of the site gives rise to landscape constraints however it is expected that any new development would be expected to deliver significant new landscape infrastructure to mitigate adverse effects. A major urban expansion or delivery of a new settlement in this location would likely require a strategic solution to transport infrastructure in the area, given the site’s distance from high order facilities, including key areas of work. It is recognised that any development would need to deliver new on-site infrastructure, such as a local centre, primary and secondary school provision, employment opportunities and public open space for example, in order to minimise the need to travel elsewhere. A key constraint at this stage is that the site currently serves a number of economic roles that are important to the local area. These include film production facilities, a well-established market and a number of smaller businesses. At present, the site is not promoted for redevelopment and there is no reasonable prospect that the site will be made available during the Local Plan period. For this reason, the site is not recommended for allocation in the new Local Plan.

Site Reference: New Settlement - Long Marston

SA Objective		Long Marston	
1	Biodiversity	The area is currently greenfield and therefore development at this location would have some adverse effects on biodiversity. There are two Local Wildlife Sites (LWS) located in the south-eastern area of the site ('Field North of Long Marston Cricket Ground' and 'Grassland East of Cricket Ground') and in addition there are other LWSs located in close proximity to the south of the site. All these could be adversely affected by new development.	x
		Development at this large site would provide the opportunity to include new Green Infrastructure which would have positive effects for biodiversity.	✓
2	Water	A watercourse runs through the central area of the site. Development may have adverse effects on this watercourse.	?
3	Flood risk	A central strip of the site is in Flood Zone 2 and 3. In addition a large part of the site is shown to be susceptible to surface water flooding. Whilst residential development would not take place on the areas at highest risk of flooding, it is highly likely that other infrastructure associated with the new development e.g. an access road would be required in the higher flood risk areas.	x,x
4	Climate change	Whilst a new settlement would be expected to provide some new services and facilities, and also taking into account the existing limited services and facilities in Long Marston, there would still be a need for travel to access higher order services and facilities, for example in Aylesbury and Tring. Given the very limited bus services in this part of the Borough it is likely that the majority of trips would be by private car, thereby resulting in an increase in greenhouse gas emissions.	x
		There is a railway station in nearby Cheddington (approx. 2.5 miles away), which has approx. hourly services to London Euston. This could help to reduce reliance on the private car for those who travel to work in London or one of the other destinations served by this line (e.g. Hemel Hempstead or Watford). It is anticipated that the new settlement would provide some limited services and facilities, which given the level nature of the site would be easy to walk and cycle to. This would help to reduce the growth in greenhouse gas emissions.	✓
5	Air Quality	The likelihood of increased car use to access higher order services could result in exacerbation of air quality issues in the destination towns, for example on Station Road in Hemel Hempstead.	x
6	Soils	Development of this greenfield area would result in soil sealing.	x
7	Resource efficiency	No predicted effects.	-

SA Objective		Long Marston	
8	Historic environment	A small area at the north of the site is in an area of archaeological significance (<i>'Earthworks, including deserted medieval villages of Tiscott'</i>), whilst part of the southern area is also in an area of archaeological significance (<i>'Medieval village of Long Marston, moat, ridge & furrow'</i>). The <i>'Ardwick deserted medieval village'</i> Scheduled Monument is adjacent to the norther boundary of the area and there are three other Scheduled Monuments within 1.5km of the site. In addition the Long Marston Conservation Area is approximately 100m to the south of the site and in addition there are several Listed Buildings in close proximity to the north and south of the site. The settings of all these heritage assets may be adversely affected by development in this location.	?
9	Landscape / Townscape	The Chilterns AONB is located approximately 2.5 km to the south east of the site and given the elevated nature of the AONB in relation to the site (i.e. overlooking the site) any new development would be visible from the AONB and would therefore be likely to have an adverse effect on the AONB's setting. Development of this site would in effect extend Long Marston into open countryside and would have significant adverse effects on the local landscape in this part of the Borough.	xx
10	Health and wellbeing	Development of this area would adversely affect the public rights of way that run through the site and may result in less people using them for recreational purposes.	?
11	Sustainable locations	The site's location away from a major public transport corridor means that a large majority of non-local journeys, including for work, are expected to be made by private car. There is however a railway station in nearby Cheddington (approx. 2.5 miles away), which has approx. hourly services to London Euston. This could help to reduce reliance on the private car.	x
12	Community cohesion	The new mixed-use settlement would provide new services and community facilities, which would be of a benefit to both new and existing residents of this part of the Borough.	✓
13	Housing	A new settlement at this location would provide over 3,000 new dwellings, which would be expected to cover the full range of housing types as identified in the SHMAA, including affordable housing.	✓✓
14	Sustainable prosperity	Development of a new mixed-use settlement provides the potential for the provision of new local services and some new commercial development – which will help to support the local economy in this part of the Borough. In addition the provision of new housing in this area the higher order services in Tring and Aylesbury, maintaining their viability and boosting the local economy.	✓

SA Objective		Long Marston
15	Employment and skills	The mixed-use development proposed for this settlement would offer some limited new local employment opportunities.



Dacorum BC reasoning for not including in Draft Local Plan

The site performs well on a number of criteria, however there are a number of identified constraints that impact its development potential. A key constraint is in relation to flood risk, with large areas of the site located in Flood Zones 2 and 3. It is highly unlikely that development within this site, or in the vicinity of the site, would avoid areas of higher flood risk, particularly with respect to the delivery of essential infrastructure. In addition to this, the delivery of a new settlement in this location would have a significant adverse effect on the immediate and wider landscape, including view to and from the Chilterns AONB. At present, the site is not promoted for development and there is no reasonable prospect that the site will be made available during the Local Plan period. For this reason, as well as consideration of landscape and flood risk issues (including application of the sequential test), the site is not recommended for allocation in the new Local Plan.