

# Draft SA/SEA of North Hertfordshire Local Plan Preferred Options

Report to North Hertfordshire District Council

November 2014

# North Hertfordshire District Council SA/SEA of Local Plan Preferred Options

# A report by CAG Consultants

# November 2014

Principal author	Name: Gerard Couper Position: Partner	Date 9/10/14
Approved by	Name Tim Maiden Position Partner	Date 13/10/14

#### **Revision history**

Version	Date	Creation/update summary
RO	9/10/14	First draft with appendices
R1	12/11/14	Second draft with appendices reviewed
R2	17/11/14	Third draft with minor amendments to report
R3		

To contact CAG Consultants: CAG CONSULTANTS 150 Minories, London, EC3N 1LS Tel/fax 020 8555 6126 hq@cagconsult.co.uk www.cagconsultants.co.uk For direct enquiries about this report:

Gerard Couper Partner CAG Consultants Tel : 01364 210 123 Mob : 07866 361111 Skype : gerard.couper Email :gc@cagconsult.co.uk

#### **CAG Consultants**

Founded in 1983, CAG Consultants is an independent, employee-owned co-operative. We provide support, policy advice and training in a wide range of fields relating to sustainable development and climate change, regeneration and stakeholder & community involvement. We deliver high quality, innovative and thoughtful work for our clients, who include government departments, local authorities, public agencies, the NHS and regeneration and community planning partnerships across the UK. We pride ourselves on our strong ethical approach and our commitment to social justice and improving and protecting the environment. For more information, see <a href="https://www.cagconsultants.co.uk">www.cagconsultants.co.uk</a>

# Contents

No	on-technical summary	i
1.	Background and methodology	1
	1.1 Purpose and contents of this report	1
	1.2 Legal and regulatory requirements	1
	Sustainability Appraisal and Strategic Environmental Assessment	1
	Habitats Regulation Assessment	2
	1.3 Development of the Local Plan	3
	Overview	3
	Objectives of the Local Plan	6
	Options development	6
	1.4 The five stages of appraisal	8
	1.5 How the appraisal was carried out	10
	Overview	10
	The testing process	12
	Information used in the testing process	13
	Defining significant effects	13
	1.6 Consultation	14
2.	Context, baseline and sustainability objectives	16
	2.1 North Hertfordshire – overview	16
	Environment	16
	Society	16
	Economy	17
	2.2 Links to other policies, plans and programmes	18
	2.3 Baseline review	18
	2.4 Sustainability Issues	19
	2.5 The sustainability appraisal framework	21
4.	Assessing the effects of options	26
	4.1 Strategic Options	26
	4.2 Housing targets and strategic site options	26
	4.3 Site options	27
5 F	Predicting the effects of the Plan	28
	5.1 Plan policies	28
	5.2 Overall effects of the Plan	28

#### 5.3 Assessment of cumulative effects

6. Monitoring	37
6.1 Purpose of Monitoring	37
6.2 Monitoring Process	37

33

# **Appendices**

Appendix 1	Other relevant plans,	programmes and policies
------------	-----------------------	-------------------------

- Appendix 2 Key sustainability issues and baseline data
- Appendix 3 Appraisal of Plan objectives
- Appendix 4 Spatial strategy options assessment
- Appendix 5 Appraisal of housing target options (2012) – matrices
- Appendix 6 Appraisal of strategic housing options – summaries and matrices
- Appendix 7
- Appraisal of preferred sites significance criteria, summaries and matrices Appraisal of sites not taken forward significance criteria, summaries and matrices Appendix 8
- Appraisal of policies matrices Appendix 9
- Consultation comments and responses Appendix 10

# **Non-technical summary**

# Purpose and contents of this report

This report is a sustainability appraisal (SA) and Strategic Environmental Assessment (SEA)<sup>1</sup> of the North Hertfordshire Local Plan Preferred Options report. It has been prepared to accompany the public consultation on the Preferred Options document. In simple terms it aims to provide information on the social, economic and environmental effects of the Preferred Options version of the Local Plan.

# About the Local Plan

#### Overview

The North Hertfordshire Local Plan will bring together the separate parts of what was previously called the Local Development Framework (LDF). This included the Core Strategy, Development Policies and Land Allocations Documents. The new approach is being followed because of changes to the planning system which happened in March 2012.<sup>2</sup>

The Local Plan sets the policies and strategy to guide development but also specifies sites to meet the District's needs for housing, employment, and other uses.

#### Local Plan objectives

The Plan objectives are informed by the National Planning Policy Framework (NPPF). They are shown in the table below.

Objectives for the Local Plan
The Local Plan will:
- identify locations for a range of types of homes, including affordable homes, to meet identified
needs and provide adequate housing for the growing population;
- provide opportunities for new and existing businesses to grow and thrive;
- recognise the changing functions of our town centres and encourage them to be destinations
for social, employment and leisure purposes as well as their traditional retail roles;
- protect, promote and enhance village and neighbourhood centres, and provide for
appropriate facilities in major new developments;
- identify infrastructure to support new and existing communities and businesses and work with
partners towards their delivery;
- seek to ensure good access for residents to social and cultural infrastructure, including
appropriate provision in major new developments;
- minimise the impacts of growth and development on the environment, climate emissions and
natural resources, and use the opportunities provided to seek to enhance the wider
environment.

#### **Table 1 Local Plan objectives**

<sup>&</sup>lt;sup>1</sup> Required to meet a European Union Directive, referred to as the SEA Directive

<sup>&</sup>lt;sup>2</sup> With the introduction of the National Planning Policy Framework

# **Options development**

A key part of the process of producing the Local Plan has been to consider different approaches to managing development in the District. This includes deciding on the amount and location of new housing. These different approaches are called strategic options. The Council started developing these options in 2005. Its decision on which approach to take, including the amount and location of new housing, took account of the results of this Sustainability Appraisal, consultation comments, and research on the need for housing in the District (called the Strategic Housing Market Assessment). Appendix 4 contains a summary of the different stages of this process.

The Local Plan Preferred Options document includes a list of preferred site locations and for the first time excludes specific sites from consideration, along with the reason for doing so. Detailed information on why particular sites have been included or excluded is contained in the Site Selection Matrix (published alongside the Local Plan), which has been informed by this Sustainability Appraisal, and many other evidence documents including consultation comments, Green Belt Review, landscape assessments<sup>3</sup>.

# **About North Hertfordshire**

The following gives a brief profile of the district. More detailed information on the current state of the District and the issues it faces is contained in Appendix 2

# Environment

North Hertfordshire comprises a broad band of 375km<sup>2</sup> of attractive undulating countryside following the chalk escarpment of the Chiltern Hills and East Anglian Heights, which are separated by the 'Hitchin Gap' through which the East Coast Main Line railway passes. Most of the rural area is farmland, although there is some woodland, especially in the west of the district. Part of the district around Lilley and Hexton is within the Chilterns Area of Outstanding Natural Beauty. The district contains a variety of habitats for wildlife and plants, including areas of high biodiversity - notably the chalk grasslands and chalky boulder clay woodlands and meadows in the east of the district, the oak and hornbeam woodlands of the west of the district and the wet meadows and fens along the River Hiz and its tributaries.

The district has four main settlements: the historic market towns of Hitchin, Baldock and Royston and the world's first Garden City, Letchworth. It also includes most of the Great Ashby estate, which is part of the urban area of Stevenage, and numerous villages and hamlets. The district has 35 civil parishes and two unparished areas (Hitchin and Baldock). All the towns and many of the villages have historic areas and buildings; there are 40 conservation areas and approximately 2,750 listed buildings. The district has a long history of human habitation and is crossed by the prehistoric Icknield Way. It also contains many ancient monuments, including the Iron Age Ravensburgh Castle at Hexton, the largest fort in south-east England.

In common with the rest of the world, the district needs to look at how to minimise the impacts of climate change, both by minimising the contribution human life makes to climate change and by adapting to new climate patterns. Whilst the district is highly unlikely to be directly affected by rising sea levels (although if all the world's ice sheets melted, Hitchin and Royston would be submerged), the changing climate will have a profound effect on our water and food supplies and way of life in general.

<sup>&</sup>lt;sup>3</sup> Full details of the evidence base can be found on http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-2/evidence\_base.htm SA/SEA of North Hertfordshire Local Plan Preferred Options ii

## Society

The district has a population of about 127,100<sup>4</sup> people. Just over 75% of the population live in the four towns or Great Ashby. A combination of factors, including people living longer, fewer people living in each home, proximity to London and relatively low interest rates have been causing housing costs to rise. The cost of housing relative to local incomes in the district is high and is beyond the reach of many, especially young adults. This is reflected in a skewed age profile - the district has significantly fewer people aged 18 - 30 than it does under 18s and over 30s.

The need to provide additional housing for local needs, and the wider needs of the housing market which affects the District will require the use of **greenfield sites** and put significant pressure on the environment and quality of life in the District. The housing target for this plan is **14,200** dwellings, representing 12,100 as North Hertfordshire's own objectively assessed need for development and 2,100 dwellings towards the unmet need for housing from Luton.

## Economy

The district has good rail and road links. There is a range of local bus services, although services can be infrequent, particularly in the rural area. Car usage and ownership is high in the district, and traffic congestion is seen as one of the areas where residents would most like to see improvements<sup>5</sup>.

The district is also affected by two international airports, London Luton Airport immediately adjoining the district boundary to the west and London Stansted Airport a little further away to the east. They are a source of employment and bring economic benefits, but they also bring environmental damage and nuisance from noise, air pollution and vibrations, both from the air traffic itself and from land traffic to and from the airports. Both airports are looking to expand, which would have an impact on the district.

There is no one dominant centre serving the district. Hitchin town centre is the largest retail destination, followed by Letchworth and there are large employment areas in Letchworth, Hitchin and Royston. There are traditional markets in Hitchin, Baldock and Royston and Business Improvement Districts are currently operating in Hitchin, Letchworth Garden City and Royston. The district's settlements have a complex system of interdependencies with each other and with surrounding larger towns, notably Stevenage, Luton, Cambridge, Welwyn Garden City, Milton Keynes and London. A significant proportion of the district's population commutes to these larger centres for work and for shopping. There is significant leakage of retail expenditure from the district's population using retail centres elsewhere. In the rural areas, there are a number of village shops and services, although these have declined in recent years.

# Links to other policies, plans and programmes

As part of the sustainability appraisal process, research was undertaken into other relevant policies, plans and programmes which might have an influence on the Local Plan. Relevant documents at international, national, regional and local level have been reviewed and the results are included as Appendix 1 to the report. This information was used in later stages of the appraisal process.

<sup>&</sup>lt;sup>4</sup> From 2011 census

<sup>&</sup>lt;sup>5</sup> Best Value Performance Indicator Survey 2003/04

# Testing the effects of the Plan

# Approach used

In the sustainability appraisal process, the potential effects of a plan are tested against a series of objectives for sustainable development. For example, for an objective *to use resources efficiently*, the appraisal asks whether the plan will have a positive or negative effect on this objective.

The objectives are combined into an appraisal framework. The framework used for testing the Plan is shown in the table below, along with the questions used in the testing process. It was used for testing **objectives**, **strategic alternatives and policies**. A slightly modified version was used **for testing proposed sites**. The objectives which address the issues which are required to be covered by the SEA Directive<sup>6</sup> are shown underlined.

#### Table 2: Appraisal framework

SA Objective <sup>7</sup>	SA Sub Objective: will the policy or proposal help to
	ECONOMIC ACTIVITY
1 Achieve sustainable levels of prosperity and economic growth	<ul> <li>maintain a diversified economy, with increased resilience to external shocks?</li> <li>encourage new business to start-up and thrive in the District?</li> <li>support and encourage the rural economy and diversification?</li> <li>support and promote sustainable tourism in towns and rural areas?</li> <li>improve the quality of local jobs available to people in the District?</li> <li>increase the skills base?</li> <li>make the cost of housing more affordable to those employed in the District?</li> </ul>
	LAND USE AND DEVELOPMENT PATTERNS
2(a) Minimise the development of greenfield land and other land with high environmental and amenity value?	<ul> <li>promote the use of brownfield sites and if brownfield sites are not available, land of low environmental and amenity value?</li> <li>maximise reuse of vacant buildings and derelict land?</li> <li>minimise the loss of the best and most versatile agricultural land?</li> <li>reduce quantity of unremediated contaminated land?</li> </ul>
2(b) Provide access to green spaces	<ul> <li>provide/improve access for all residents of the District to green spaces?</li> <li>provide opportunities for people to come into contact with and appreciate wildlife and wild places?</li> <li>maintain/improve the public right of way network?</li> </ul>
2 (c) Deliver more sustainable location patterns and reduce the use of motor vehicles	<ul> <li>locate development so as to reduce the need to travel?</li> <li>reduce car reliance, encourage walking, cycle, bus, and train use?</li> <li>reduce road freight movements?</li> </ul>

<sup>6</sup> listed in Annex 1(f)

<sup>7</sup> those relevant to the SEA Directive are shown underlined

	avoid exacerbating local traffic congestion?
	<ul> <li>provide affordable, accessible public transport in towns and in</li> </ul>
	rural areas?
	ENVIRONMENTAL PROTECTION
3(a) Protect and enhance biodiversity	<ul> <li>protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats?</li> </ul>
	<ul> <li>support and maintain extent of wetland habitat and river habitats?</li> </ul>
3(b) Protect and enhance landscapes	<ul> <li>protect and enhance landscapes, especially those of historic, recreational or amenity value, and within the Chilterns AONB?</li> </ul>
3(c) Conserve and where appropriate, enhance the historic environment	<ul> <li>conserve and enhance the historic built character of the District's towns and villages?</li> <li>protect sites of archaeological and historic importance, whether designated or not?</li> </ul>
3(d) Reduce pollution from any source	<ul> <li>improve the water quality of rivers and groundwater supplies?</li> <li>achieve good air quality?</li> <li>reduce ambient noise, especially from traffic?</li> <li>reduce light pollution in the District?</li> <li>protect soil quality?</li> </ul>
	CLIMATE CHANGE
4(a) Reduce greenhouse gas emissions	<ul> <li>minimise energy consumption by transport and in buildings?</li> <li>increase proportion of energy generated by renewable sources?</li> <li>encourage use of local suppliers and the consumption of local produce?</li> </ul>
<u>4(b) Improve the</u> <u>District's ability to adapt</u> to climate change	<ul><li>reduce vulnerability to climate change, exploit any benefits?</li><li>avoid development in areas at risk from flooding?</li></ul>
	A JUST SOCIETY
5(a) Share benefits of prosperity fairly	<ul> <li>reduce disparities in income levels?</li> <li>contribute to regeneration of deprived areas (estates in Letchworth and Hitchin)?</li> <li>provide employment and other opportunities for unemployed, especially long term unemployed and the disabled?</li> <li>encourage entrepreneurial activity in deprived areas?</li> </ul>
5(b) Provide access to services and facilities for all	<ul> <li>provide access to services and facilities without need to use a car?</li> <li>retain rural services, especially shops, post offices, schools, health centres and bus services?</li> <li>recognise the needs of specific groups such as minority ethnic groups, the young, the elderly and the disabled?</li> </ul>
5(c) Promote community cohesion	<ul> <li>support development of voluntary sector?</li> <li>encourage development of community run business?</li> <li>encourage people's feelings of belonging, for example by providing community meeting places?</li> <li>recognise and value cultural and ethnic diversity?</li> </ul>
5(d) Increase access to decent and affordable housing	<ul> <li>help improve the quality of the housing stock and reduce the number of unfit homes?</li> <li>increase access to affordable housing, particularly for the young, the disabled and key workers?</li> </ul>

5(e) Reduce crime rates and fear of crime	<ul> <li>encourage crime reduction, particularly through the appropriate design of new development?</li> </ul>	
	help reduce the fear of crime?	
5(f) Improve conditions	help promote healthy lifestyles?	
and services that engender good health	<ul> <li>improve access to health services by means other than private cars?</li> </ul>	
and reduce health inequalities	<ul> <li>reduce ambient noise near residential and amenity areas?</li> </ul>	
	reduce road accidents?	
	reduce accidents and damage from fires?	
5(g) Increase	<ul> <li>improve access to skills learning by young people?</li> </ul>	
participation in education and life-long learning	<ul> <li>improve access to skills learning by adults?</li> </ul>	
5(h) Maintain and improve culture, leisure and recreational activities that are available to all	increase access to culture, leisure and recreational activities?	
	RESOURCE USE AND WASTE	
6(a) Use natural	minimise the demand for raw materials?	
resources efficiently; reuse, use recycled where possible	<ul> <li>encourage sustainable design, use of sustainable building materials and minimise wastage caused by construction methods?</li> </ul>	
	<ul> <li>limit water consumption to levels supportable by natural process and storage systems?</li> </ul>	
	protect groundwater resources?	
	promote sustainable drainage systems?	
	reduce minerals extracted and imported?	
6(b) Reduce waste	reduce, reuse or recycle waste generated?	
TOWN CENTRES		
7 Promote sustainable	encourage wider range of shops and services in town centres?	
urban living		
5	<ul> <li>encourage more people to live in town centres?</li> </ul>	
5	<ul><li>encourage more people to live in town centres?</li><li>encourage mixed use developments in town centres?</li></ul>	
	encourage mixed use developments in town centres?	
	<ul> <li>encourage mixed use developments in town centres?</li> <li>improve transport connections in, and to, town centres?</li> <li>encourage synergy in land uses, which supports the continued</li> </ul>	

## **Testing the Plan options**

As mentioned earlier, Appendix 4 outlines how different options for managing development in the District were considered and tested using a sustainability appraisal process. Appendix 5 contains more information on how different housing targets were considered and tested.

Possible sites for large developments to provide the required housing were first considered in 2013 and reviewed in 2014. Appendix 6 shows the results of testing each of these large sites.

All the sites considered for inclusion in the Preferred Options Local Plan were tested and the results are shown in Appendix 7 (sites included) and Appendix 8 (sites rejected).

# **Testing the Plan policies**

The policies contained in the Local Plan Preferred Options document have been in a process of development since the start of the Core Strategy process in 2005. They were tested at various stages up until September 2014. With each testing process, recommendations were made to improve the sustainability of the policy. The results of the testing process, along with the recommendations, and changes made as a result are included in Appendix 9.

# **Overall effects of the Plan**

The table below outlines the summary conclusions of the sustainability appraisal, showing the most important effects of the Plan on each of the sustainability objectives (called significant sustainability effects). The sustainability appraisal also took account of what are called cumulative effects, which are the overall combination of different types of effects.

#### Table 3: Significant sustainability effects of the plan

SA Objective	Significant sustainability effects
1 Achieve sustainable levels of prosperity and economic growth	Provision of additional employment sites will meet the need for local employment provision, as identified by the Employment Land Review <sup>8</sup> . Village housing sites may contribute to viability of local services. The north Baldock and north Letchworth strategic sites may also contribute to the viability of services in the towns. Some of the strategic sites may also provide employment opportunities, or link with employment development, and policy ID2: Masterplans requires masterplans for key strategic sites which will address employment provision. In combination, all policies in the Economy and Town Centres chapter (ETC1-11) they are likely to support delivery of this objective. Overall, the Plan is likely to have a significant positive effect on this objective.
2 (a) Minimise the development of greenfield land and other land with high environmental and amenity value	The great majority of the sites included in the preferred options are greenfield, including the strategic sites, and 14 other sites providing over 100 dwellings each. Therefore the plan will have a major significant negative effect on this objective.
2 (b)Provide access to green spaces	There will be some loss of informal and formal recreation areas, and development of strategic sites will make open countryside further away for existing residents. However, all new development will be required to provide greenspace as defined in policy HC2: Green space and to provide green infrastructure as outlined in policy NE2: Green infrastructure and policy ID2: Masterplans requires masterplans for key strategic sites which will address open space provision. There are significant opportunities for the strategic sites to enhance and improve links to the countryside and to connect with new and existing green infrastructure. Overall, the Plan is likely to have a significant positive effect on this objective.
2(c) Deliver more sustainable location patterns and reduce the	The strategic sites are likely to be able to support new or improved bus services, footpaths and cycleways. They are also

<sup>&</sup>lt;sup>8</sup> Employment Land Review Feb 2013 see http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-

<sup>2/</sup>evidence base/employment land review.htm

SA Objective	Significant sustainability effects
use of motor vehicles	likely to be able to provide significant levels of service within the site. However, apart from the north Baldock site they are all more than 800m from the station and likely to result in increased car use for commuting and to access some services. This also applies to the village sites and other smaller edge of town sites. Policy T1: Sustainable transport requires sustainable transport within new developments. The overall effect of the Plan on this objective is unclear, but it is likely to be negative.
3(a) Protect and enhance biodiversity	A number of sites include wildlife sites (6 sites include wildlife sites or border them), and others are adjacent to them. There are 2 sites close to SSSIs. Policy NE3: Biodiversity and NE2: Green Infrastructure will provide significant protection and potential enhancement for biodiversity in development. However, for the amount of development proposed there is bound to be some loss of biodiversity and fragmentation of habitats, at least in the short to medium term. Each site should be assessed to ensure that green corridors and important features such as hedges and mature trees are retained. Opportunities for habitat enhancement should also be sought. The effectiveness of this mitigation will determine the long term effects of the Plan on this objective.
3(b) Protect and enhance landscapes	Development of this scale is likely to have significant impacts on the character and quality of landscape and on local distinctiveness. Significant landscape impacts have been identified for all the strategic sites included in the Plan, and for some of the other large sites. A range of mitigation measures have been identified to reduce the impacts in each case (and this is supported by Plan policies such as NE1: Landscape and Environmental Protection and ID2: Masterplans), but overall the Plan is likely to have a major significant negative effect on this objective.
3(c) Conserve and where appropriate enhance the historic environment	There are a significant number of sites which impact on or contain historic features. There are 15 sites which border or are within conservation areas and approximately 20 <sup>9</sup> sites include designated areas of archaeological interest, which will require further investigation. There are 3 sites which contain listed buildings and the east Luton strategic site is close to Putteridge Bury Historic Park and Gardens. A large number of other sites lie near or adjacent to heritage features, and in the case of the large sites may well impact on their setting. Development will require appropriate investigation and mitigation, but it is likely that development of this scale will have a negative effect on this objective.
3(d) Reduce pollution from any source.	Potential or probable land contamination was noted in a significant number of sites. These issues would require further investigation prior to development in order to avoid contamination of soil, groundwater and watercourses, as 38 sites are in Source Protection Zones 2 or 3.
	There are significant constraints on sewerage infrastructure in the Stevenage area. The strategic sites close to Stevenage would put increased pressure on the sewerage and water supply infrastructure, although the Rye Meads Water Cycle Study identifies potential solutions.
	There also may be issues with the capacity of sewerage infrastructure in Royton to accommodate the proposed levels of

<sup>&</sup>lt;sup>9</sup> 23 sites include or border designated archaeological areas, some sites include more than one designated area. SA/SEA of North Hertfordshire Local Plan Preferred Options viii

SA Objective	Significant sustainability effects
	development. Policies NE7: Water quality and environment, NE8: Water Framework Directive and wastewater infrastructure and NE9: Contaminated land provide protection for groundwater and watercourses, and designated European sites which are close to the District.
	The initial construction phase for developments is likely to be disruptive for local residents and have significant negative noise and dust impacts in the short term.
	Development on this scale would inevitably result in increased light, air and noise pollution, particularly from the strategic sites. Policy D4: Air quality addresses air pollution issues. The Plan is likely to have a significant negative effect on this objective in the short term, but the medium and long term effect depends on how these issues are addressed in delivery.
4 (a) Reduce climate change emissions	Overall, new development on this scale will result in significant increases in carbon emissions, as will the additional car travel discussed in 2(c). However, the development of the strategic sites and other large housing sites provides significant opportunities for renewable and low carbon energy. Policy ID2: Masterplans requires masterplans to consider their viability for the strategic sites, though there is no requirement for other large sites. Policy NE4: Renewable energy development supports renewable energy development
	Overall, the Plan is likely to have a significant negative effect on this objective.
4 (b) Improve the District's ability to adapt to climate change.	The provision of green infrastructure will contribute to reducing the effects of rising temperatures. There is no specific requirement to consider the effects of rising temperatures in the policies, though it is an issue likely to be considered in the Design SPD. Surface water flooding has been identified as an issue for a significant number of sites, including all the strategic sites, and will need to be appropriately investigated and managed. A small number of the sites are at risk of flooding, falling within flood zones 2 or 3 and may require further investigation – fluvial flooding is addressed by policy NE6: Reducing flood risk, though it does not specifically mention surface water flooding. As it stands the Plan's effect on this objective is uncertain, as it depends on the degree to which development takes account of surface water flooding and increased temperatures.
5(a) Share benefits of prosperity fairly	The contribution the Plan is likely to make to employment provision, discussed under objective 1, is likely to provide opportunities for the long term unemployed. The north Letchworth strategic site is likely to contribute to the regeneration of the town, and the sites on the edge of Luton and Stevenage are likely to provide affordable housing for those in deprived areas of these cities. Overall the Plan is likely to have a significant positive effect on this objective.
5(b) Provide access to services and facilities for all.	The strategic sites and other large housing sites are likely to provide a range of community facilities within the development. Village developments are likely to support the retention of rural services. Policies ETC6: Town and local centres and ETC11: Scattered local shops, services and facilities in towns and villages protect village centres and services. Overall the Plan is

SA Objective	Significant sustainability effects	
	likely to have a significant positive effect on this objective.	
5(c) Promote community cohesion	The strategic sites and other large housing sites are likely to provide a range of community facilities, including community centres. However, they will have significant effects on existing communities, which could include impacts on views and local distinctiveness, increased traffic, and reduced access to open countryside. These impacts could affect community cohesion. Development will require appropriate planning and design and the active engagement with existing residents to mitigate the effects. Policy D3: Protecting living conditions addressed this issue. Policy ID2: Masterplans requires masterplans for the strategic sites to consider how the developments relate to existing communities; and how the new community will be encouraged to develop its own sense of identity. The overall effect of the Plan on this objective is uncertain, as it depends on how these issues are addressed in delivery.	
5(d) Increase access to decent and affordable housing	The provision of 14,200 dwellings would include a significant proportion of affordable housing, as outlined in policy HDS3: Affordable housing. The requirement in ID2: Masterplans for masterplans to consider opportunities for self-build is also likely to increase access to affordable housing. The Plan is therefore likely to have a major significant positive effect on this objective.	
5(e) Reduce crime rates and fear of crime	Policy D1: Design and sustainability requires proposals to design-out opportunities for crime and anti-social behaviour. The overall effect of the Plan on this objective is uncertain, as it depends on delivery.	
5(f) Improve conditions and services that engender good health and reduce health inequalities	As discussed under 3(d), development on this scale would inevitably result in increased air and noise pollution, particularly from the strategic sites. Policy D4: Air quality addresses air pollution issues. A small number of the sites are adjacent to main roads and or railway lines. The noise and vibration is a significant health issue that would require mitigation. The strategic sites are likely to include provision for health services. The initial construction phase for developments is likely to be disruptive for local residents and have significant negative noise and dust impacts in the short term. The Plan is likely to have a significant negative effect on this objective in the short term, but the medium and long term effect depends on how these issues are addressed in delivery.	
5(g) Increase participation in education and life-long learning	There would need to be increased secondary and primary provision to accompany development of this scale, and specific capacity issues have been identified for Baldock and Hitchin and some of the villages. However, the strategic sites and other large housing sites are likely to contribute towards additional provision. Village developments are likely to support the retention of village schools. The overall effect of the Plan on this objective is uncertain, as it depends on delivery, though it is likely to be positive.	
5(h) Maintain and improve culture, leisure and recreational activities that are available to all	Policy HC1: Healthy communities requires developers to make provision for new community, cultural, leisure and recreation facilities. All new development will be required to provide greenspace as defined in policy HC2:Green space and to provide green infrastructure as outlined in policy NE2:Green infrastructure, and policy ID2: Masterplans requires masterplans for key strategic sites which will address open space provision.	

SA Objective	Significant sustainability effects
	The overall effect of the plan on this objective is likely to be positive.
6(a) Use natural resources efficiently; reuse, use recycled where possible	Water resources and the provision of sewerage infrastructure to protect water resources have been identified as significant sustainability issues for the District. As noted in the Rye Meads Water Cycle Study, there are significant pressures on the water supply infrastructure for the majority of the District. The number of new homes proposed will put increased pressure on the infrastructure. The Water Cycle Study identifies solutions, which include high levels of water efficiency. Policy NE5: Delivering sustainable water supply addresses this issue.,
	Appropriate sewerage infrastructure will need to be provided to support new development and protect watercourses and groundwater. This is a particular issue for sites adjacent to Stevenage, and possibly in Royston, and is addressed by policy NE8.
	Policy D1:Design and sustainability supports the use of sustainable urban drainage systems (SuDS), although there are constraints on some sites, including some of the strategic sites. Due to the effect of additional demand for water resources, the Plan is likely to have a significant negative effect on this objective.
6(b) Reduce waste	Policy D1: Design and sustainability promotes the efficient use of new materials from local or sustainable sources, together with the reuse and recycling of materials, though the details will be outlined in the Sustainable Design SPD. The overall effect of the plan on this objective will depend on the detail in the SPD, but is likely to be positive.
7 Promote sustainable urban living	The majority of the sites included in the Plan are on the edge of towns. The north Baldock and north Letchworth strategic sites may contribute to the viability of services in the towns. However the residents of village sites and those with poorer accessibility may be more likely to use out of town supermarkets or facilities in other centres. Policy ET6: Town and local centres protects town centres. The overall effect of the Plan on this objective is uncertain, as it depends on delivery of the strategic sites.

# Monitoring

The Council will monitor the significant sustainability effects of the Plan as part of its Annual Monitoring Reports. Where necessary, the Reports will also propose measures for addressing negative effects, including unexpected problems.

# Consultation

In order to meet the requirements of the SEA Directive and the UK Guidance, the planning authority must seek the views of the three designated environmental consultation bodies on the scope of the appraisal and on the draft report. It must also consult with the public on the draft report. Appendix 10 lists comments made by the consultees on the previous stages of the process, and how they have been addressed.

# 1. Background and methodology

# **1.1 Purpose and contents of this report**

This report is a sustainability appraisal (SA) and Strategic Environmental Assessment (SEA) of the North Hertfordshire Local Plan Preferred Options. It has been prepared to accompany the public consultation on the Preferred Options document. In simple terms it aims to provide information on the social, economic and environmental effects of the Preferred Options version of the Local Plan.

A key purpose of this report is to draw together and update the previous appraisals undertaken in the Local Plan development process. It describes how the appraisal has been undertaken throughout the different stages of the Local Plan development, starting with the original work on developing the Core Strategy in 2005. It describes how it meets legal and regulatory requirements, gives information on the results of each stage of the appraisal process, and outlines the likely effects of the Plan.

# 1.2 Legal and regulatory requirements

## Sustainability Appraisal and Strategic Environmental Assessment

The National Planning Policy Framework (March 2012) states<sup>10</sup> that:

a sustainability appraisal which meets the requirements of the European Directive on strategic environmental assessment should be an integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors.

Strategic Environmental Assessment (SEA) is required by a European Union Directive<sup>11</sup>. This directive requires the preparation of an Environmental Report in which 'the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated'.

The UK Government has included guidance on SA/SEA in the National Planning Policy Guidance published in March 2014<sup>12</sup> (referred to as 'The Guidance in this report). This appraisal, which incorporates a full sustainability appraisal and Strategic Environmental Assessment (SA/SEA) has been carried out in accordance with that guidance. Throughout the document reference to sustainability appraisal also incorporates a SEA meeting the requirements of the EU Directive and UK regulations.

Where necessary, the appraisal draws on the additional guidance outlined in *A Practical Guide on the Strategic Environmental Assessment Directive*<sup>13</sup>, published in 2005 (referred to as "the Practical Guide" in this report).

SA/SEA of North Hertfordshire Local Plan Preferred Options 1

<sup>&</sup>lt;sup>10</sup> Para 165

<sup>&</sup>lt;sup>11</sup> European Union Directive 2001/42/EC, which was transposed in to UK law by the Environmental Assessment Regulations for Plans and Programmes, 2004

<sup>&</sup>lt;sup>12</sup> See <u>http://planningguidance.planningportal.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/</u>

<sup>&</sup>lt;sup>13</sup> See <u>http://www.pas.gov.uk/pas/core/external-</u>

link.do?redirectUrl=http%3A//www.communities.gov.uk/publications/planningandbuilding/practicalguidesea

The table below sets out the information required to be given in an Environmental Report<sup>14</sup> and where it can be found in this Sustainability Appraisal report.

<b>Table 4: Components</b>	making up the	e Environmental Report
----------------------------	---------------	------------------------

The information to be given in an Environmental Report	Where covered in this SA report
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	1.3 , 2.1 and appendix 1
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Appendix 2
c) The environmental characteristics of areas likely to be significantly affected;	Appendix 2
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Appendix 2
e) The environmental protection objectives, established at international, community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Appendix 1
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, & fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	Appendices 3-9
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Appendices 3-9
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Appendix 4 and Table 6
i) a description of measures envisaged concerning monitoring in accordance with Article 10;	Section 6
j) a non-technical summary of the information provided under the above headings.	Front of the report

## **Habitats Regulation Assessment**

The Council is also required to undertake a screening determination on the need for Appropriate Assessment of the Local Plan under the Habitats Directive. The screening determination was undertaken in February 2013<sup>15</sup>. The determination reviewed the likely effects on European sites within 15km of North Hertfordshire, and found that the Local Plan is not likely to have significant effects on any of these sites. The determination made some recommendations for the Local Plan, which have been taken account of in this SA report.

SA/SEA of North Hertfordshire Local Plan Preferred Options 2

 <sup>&</sup>lt;sup>14</sup> As set out in Art. 5 and Annex I of the Directive
 <sup>15</sup> See http://www.north-herts.gov.uk/hra\_screening\_determination\_final\_february\_2013.pdf

# 1.3 Development of the Local Plan

#### **Overview**

The North Hertfordshire Local Plan will bring together the separate parts of what was previously called the Local Development Framework (LDF). This included the Core Strategy, Development Policies and Land Allocations Documents. The new approach is being followed because of changes to the planning system which happened in March 2012.<sup>16</sup>

The Local Plan sets the policies and strategy to guide development but also specifies sites to meet the District's needs for housing, employment, and other uses. The chapters of the Local Plan are shown in the table below. Chapter 12 (Communities) outlines the preferred site options for delivering new housing and employment provision.

#### **Table 5: Local Plan chapters**

1.	Introduction		
2.	Vision and Objectives		
3.	Economy & Town Centres		
4.	Countryside and Green Belt		
5.	Transport		
6.	Housing and development strategy		
7.	Design		
8.	Healthy Communities		
9.	Natural Environment		
10.	Historic Environment		
11.	Infrastructure & Delivery		

12. Communities

The development of the Local Plan has involved a number of different stages, starting in 2005. Each of these stages has also been accompanied by a SA/SEA. The table overleaf outlines the different stages of Local Plan development and SA/SEA.

<sup>&</sup>lt;sup>16</sup> With the introduction of the National Planning Policy Framework

	Table 6: North Hertfordshire Local Plan development stages including SA/SEA and options					
ГО	Time- line	Plan stage	Plan details	SA/SEA stage	SA/SEA details	Development of options
<b>)</b> CAL	June/ July 2005	Evidence gathering - Core Strategy/ Development Policies		Stage A: Setting the context, establishing the baseline and consulting on scope	Produced <u>SA/SEA</u> <u>Scoping Report</u> and consulted statutory consultation bodies	
DEVEL	Sept/ Oct 2005	Core Strategy/ Development Policies DPD development and consultation	Published and consulted on <u>Issues and Options</u> <u>Paper</u> for Core Strategy/ Development Policies	Stage B: Developing strategic alternatives and assessing effects	Produced <u>SA/SEA report</u> on issues and options. Report considered the effect of strategic options contained in the Issues and Options report	Strategic options for the following themes were identified and appraised: Rural areas and settlement pattern; Housing; Employment and Tourism
	May 2006		Consultation on spatial development options			<b>Spatial options</b> were developed and consulted on, which drew out more detail than the housing strategic options.
LOPMENT	Sept/ Oct 2007		Published and consulted on <u>Preferred Options</u>	Stage B: Evaluating the likely effects of the DPD,	Produced <u>SA/SEA report</u> on Preferred Options.	A preferred spatial strategy (covering the strategic options considered in 2005) included in DPD, with reasons for choices and alternatives excluded.
	Sept 2007	Evidence gathering -Land Allocations DPD		Stage A: Setting the context, establishing the baseline and consulting on scope	Produced <u>SA/SEA</u> <u>Scoping Report</u> and consulted statutory consultation bodies	
	Jan 2008	Land Allocations DPD development and consultation	Published and consulted on <u>Land Allocations</u> <u>Issues and Options</u> <u>paper</u>	Stage B: Developing alternatives and assessing effects	Produced <u>SA/SEA report</u> on land allocation issues and options.	Site options identified, appraised and consulted on
	July 2009		Land Allocations Additional Suggested Sites published and consulted on	Stage B: Developing alternatives and assessing effects	Produced <u>SA/SEA report</u> on additional land allocation issues and options.	Additional site options identified, appraised and consulted on

SA/SEA of North Hertfordshire Local Plan Preferred Options 4

	Time- line	Plan preparation stage	Plan details	SA/SEA stage	SA/SEA details	Development of options		
	July 2010	Revocation of Regional Spatial Strategies and regional housing targets						
	Feb 2012	Core Strategy development and consultation	Housing Growth Targets 2011- 2031 published and consulted on, in light of revocation of regional targets.	Stage B: Developing alternatives and assessing effects	Outline <u>SA/SEA report</u> produced appraising the housing target alternatives outlined in the document	Housing targets options identified, appraised and consulted on.		
Mar 2012 Publication of National Planning				olicy Framework –	changes to planning	system		
OCAL	Feb 2013	Local Plan development and consultation	Housing Options Growth Levels and Locations 2011 – 2031 published and consulted on	Stage B: Developing alternatives and assessing effects	SA/SEA report produced appraising the housing target alternatives and site alternatives outlined in the document	Updated strategic housing options, housing targets and site options identified, appraised and consulted on.		
PLAN	July 2013		Housing Additional Locations Options published and consulted on	Stage B: Developing alternatives and assessing effects	SA/SEA report produced appraising the additional site alternatives outlined in the document	Additional site options (including two additional strategic options) identified, appraised and consulted on.		
	Dec 2014		Draft Local Plan Preferred Options <mark>add</mark> link	Stage B: Developing alternatives and assessing effects	This SA/SEA report produced	An updated preferred spatial strategy, housing targets, and site options included in the Draft Local Plan, with reasons for choices and options excluded.		

## **Objectives of the Local Plan**

The Plan objectives are informed by the National Planning Policy Framework (NPPF), which at paragraph 156 sets the strategic priorities that any local plan needs to consider. They are shown in the table below.

NPPF paragraph 156:	Objectives for the Local Plan
Local planning authorities should set out the <b>strategic priorities</b> for the area in the Local Plan. This should include strategic policies to deliver:	The Local Plan will:
- the homes and jobs needed in the area;	<ul> <li>identify locations for a range of types of homes, including affordable homes, to meet identified needs and provide adequate housing for the growing population;</li> <li>provide opportunities for new and existing businesses to grow and thrive;</li> </ul>
- the provision of retail, leisure and other commercial development;	<ul> <li>recognise the changing functions of our town centres and encourage them to be destinations for social, employment and leisure purposes as well as their traditional retail roles;</li> <li>protect, promote and enhance village and neighbourhood centres, and provide for appropriate facilities in major new developments;</li> </ul>
- the provision of infrastructure for transport, telecommunications, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);	<ul> <li>identify infrastructure to support new and existing communities and businesses and work with partners towards their delivery;</li> </ul>
- the provision of health, security, community and cultural infrastructure and other local facilities; and	<ul> <li>seek to ensure good access for residents to social and cultural infrastructure, including appropriate provision in major new developments;</li> </ul>
- climate change mitigation and adaptation, conservation and enhancement of the natural and historic environment, including landscapes.	- minimise the impacts of growth and development on the environment, climate emissions and natural resources, and use the opportunities provided to seek to enhance the wider environment.

#### Table 7 NPPF paragraph 156 and Local Plan objectives

The objectives were tested and amended as part of the appraisal process and the matrices are shown in Appendix 3.

#### **Options development**

A key part of the process of producing the Local Plan has been to identify strategic options for how the District should develop, and in particular where development should happen, and how much development there should be. Options development (known as alternatives in the language of the SEA Directive, but referred to as options in this report to reflect common practice in planning in the UK) is also an important part of the SA/SEA process. Table 6 summarises the options development

process through the different stages of the Local Plan. The key stages are described in the paragraphs below, and the testing process is also summarised in section 4 of this report.

#### **Strategic Options**

As shown in Table 6, strategic options for rural areas and settlement patterns, housing and employment and tourism were outlined, appraised and consulted on in 2005<sup>17</sup>, with a further consultation in 2006<sup>18</sup>. The appraisal of the options<sup>19</sup> was published again in 2007, with the Council's response. These responses were updated in 2014 to reflect changing circumstances in the Spatial Strategy Options Assessment document<sup>20</sup>. This document gives a summary of the process of developing strategic options, and outlines which strategic options were taken forward, and the reason why. It also includes an appraisal of additional strategic options relating to the Green Belt, and is included as Appendix 4 to this report.

#### Housing Targets and strategic site options

Under the Localism Act 2011, local authorities were given responsibility for setting their own levels of growth (which had previously been determined by the Regional Spatial Strategy). The Council therefore needed to consider how many homes should be built in North Hertfordshire over the next 20 years. The District Council produced a consultation paper in February 2012 outlining eight different options for housing growth, ranging from 15,800 new homes down to 2,500 homes. As a result of the consultation<sup>21</sup> and accompanying SA/SEA<sup>22</sup>, the Council decided to choose option F, for 7,000 new homes to enable it to meet the District's affordable housing needs.

However, further work was required on developing housing targets, as the National Planning Policy Framework, published in March 2012, identified<sup>23</sup> the requirement for preparation of a Strategic Housing Market Assessment (SHMA) to assess the full housing needs of the district. The SHMA needed to meet household and population changes, taking account of migration and demographic change. As a result, further consideration needed to be given to evidence for a potential housing target as the Councils preferred option of 7,000 was not based on a SHMA and the methodology hadn't specifically taken into account migration.

Therefore the Council undertook further work on a suitable housing target, taking account of evidence in North Hertfordshire District Council SHMA (2012) and the SA/SEA of housing targets (March 2012). These targets were identified and consulted on in Housing Options Growth Levels and Locations 2011 – 2031, published in February 2013.

The February 2013 document also identified, appraised and consulted on options that would in combination contribute to delivering a housing target. An additional document Housing Additional Locations Options, published in July 2013, identified two additional strategic site options. As part of

<sup>23</sup> Paragraph 159

<sup>&</sup>lt;sup>17</sup> See http://www.north-herts.gov.uk/options paper 050823 final .pdf

<sup>&</sup>lt;sup>18</sup> see http://www.north-herts.gov.uk/spatial\_strategy\_questionnaire\_may\_2006.pdf

<sup>&</sup>lt;sup>19</sup> Alongside the Core Strategy Preferred Options report.

<sup>&</sup>lt;sup>20</sup> North Hertfordshire District Council October 2014

<sup>&</sup>lt;sup>21</sup> See http://www.north-herts.gov.uk/index/environment and planning/planning/planning policy and projects-<u>2/core-strategy.htm</u>
<sup>22</sup> http://www.north-herts.gov.uk/housing\_growth\_targets\_sustainability\_appraisal.pdf

the process of deciding on the preferred site options, the appraisals of strategic site options were reviewed and compared. The updated appraisals are included as Appendix 6 of this report.

#### **Site options**

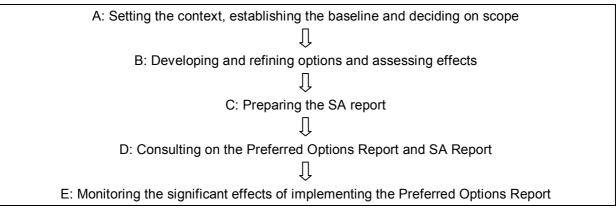
Site options were outlined, appraised and consulted on in the February 2013 document. Additional sites which arose through the consultation process were then published, appraised and consulted on in <u>Housing Additional Locations Options</u> in July 2013. The majority of the non-strategic sites are already known and have been consulted on and appraised through the <u>Issues and Options and</u> <u>Additional Suggested Sites documents and associated SA/SEAs<sup>24</sup></u> from 2008 and 2009.

The Local Plan Preferred Options document includes a list of preferred site locations and for the first time excludes specific sites from consideration, along with the reason for doing so. Detailed information on why particular sites have been included or excluded is contained in the Site Selection Matrix (published alongside the Local Plan), which has been informed by this Sustainability Appraisal and many other evidence documents including consultation comments, Green Belt Review, and landscape assessments<sup>25</sup>.

## 1.4 The five stages of appraisal

There are five stages (A to E) to the Appraisal, shown in Figure 1 below. The stages follow those indicated in the Practical Guide,

#### Figure 1: The five stages of sustainability appraisal



The table below provides further detail regarding the tasks included within the five stages and how they relate to the preparation stages for a Local Plan.

<sup>&</sup>lt;sup>24</sup> Documents available here: http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-2/land\_allocations-2/land\_allocations\_sustainability\_appraisal.htm

<sup>&</sup>lt;sup>25</sup> Full details of the evidence base can be found on http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-2/evidence\_base.htm

#### Table 8: Sustainability appraisal stages and tasks

Local Plan Stage 1: Pre-production – Evidence gathering

Appraisal stage A: Setting the context and objectives, establishing the baseline and deciding on the scope of the sustainability appraisal

A1 Identifying other relevant policies, plans, programmes and sustainability objectives

A2 Collecting baseline information

A3 Identifying sustainability issues and problems

A4 Developing the sustainability appraisal framework

A5 Consulting on the scope of the sustainability appraisal

Local Plan Stage 2: Production

Appraisal stage B: Developing and refining options and assessing effects

B1 Testing the plan objectives against the sustainability appraisal framework

B2 Appraising the plan options

B3 Predicting the effects of the plan

B4 Evaluating the effects of the plan

B5 Considering ways of mitigating adverse effects and maximising beneficial effects

B6 Proposing measures to monitor the significant effects of implementing the plan

Appraisal stage C: Preparing the Sustainability Appraisal Report

C1 Preparing the SA Report

Appraisal stage D: Consulting on the preferred options of the Local Plan Sustainability Appraisal report

D1 Public participation on the preferred options of the Local Plan and the Sustainability Appraisal report

D2 (i) Appraising significant changes

Local Plan Stage 3: Examination

D2 (ii) Appraising significant changes resulting from representations

Local Plan Stage 4: Adoption and monitoring

D3 Making decisions and providing information

Appraisal stage E: Monitoring the significant effects of implementing the Local Plan

E1 Finalising aims and methods for monitoring

E2 Responding to adverse effects

# 1.5 How the appraisal was carried out

#### **Overview**

The Council had previously commissioned CAG Consultants to undertake most elements of the sustainability appraisal of earlier documents that have comprised the Local Plan process. Exceptions to this are the Scoping Report for the Land Allocations DPD (produced by the Council with some advice from CAG), and the SA/SEA for the 2012 Housing Growth Targets and the February and July 2013 Housing Growth Levels and Locations consultation documents. Development of policy options was undertaken by the Council at all stages.

The table below summarises the various stages of the appraisal of the Local Plan. It shows the tasks that have been carried out to date, when they were carried out and any difficulties encountered. The various stages are also shown chronologically in Table 6.

Appraisal stage	When	Comments/problems
A1 Identifying other relevant policies plans and programmes and sustainability objectives	This stage has taken place during all stages of the document's production; however it was completely reviewed and updated in June 2012 to reflect changes in national planning policy.	Many policies could potentially be relevant to the plan. Those ones reviewed were judged to be the key strategic documents relevant to the plan and the appraisal
A2 Collecting baseline information	This stage was first undertaken as part of the earlier appraisal of the Core Strategy and Development Policies (final version October 2006). The material produced was used for the appraisal of the Land Allocations Issues and Options Paper in December 2007. The baseline data was then updated by CAG in January 2009 and used to inform the appraisal of the Additional Suggested Sites Issues and Options Paper undertaken in May 2009. The information was subsequently updated in November/ December 2012 as part of the Feb and July 2013 SAs.	Most information remains available, although a number of data production agencies have changed or disbanded. At a regional level, with the demise of EEDA and EERA and the revocation of East of England Plan the regional data is becoming much more difficult to find and update.
A3 Identifying sustainability issues and problems	This stage was also mainly completed as part of the earlier appraisal of the Core Strategy and Development Policies (final version October 2006). The material produced was slightly modified for the appraisal in	Data was not always readily available to back up all the issues identified

#### Table 9: How the appraisal was carried out

	December 2007 and updated along with the baseline review to inform the May 2009 appraisal. It was then updated by the Council as part of the SA/SEA of the Housing Targets Consultation in March 2012. This was then further updated by CAG Consultants in June 2012, and subsequently in August 2014.	
A4 Developing the SA framework	The initial framework was completed for the earlier appraisal of the Core Strategy and Development Policies in August 2005, updated October 2006 and October 2007. The framework was reviewed in June 2012 to check whether any changes were needed as a result of the review of policy, plans and programmes and sustainability issues. It was reviewed again in August 2014.	Framework updated to reflect the specific effects which land allocations could have on the appraisal objectives. June 2012 and August 2014 reviews concluded no changes were needed to the framework.
A5 Consulting on the scope of the SA	June –July 2005 (Core Strategy/Development Control Policies) Oct – Nov 2007 Land Allocations DPD	The comments from statutory consultees and how they were taken account of are noted in Appendix 10. No issues were eliminated from consideration as a result of the scoping process.
B1 Testing the Local Plan Objectives against the SA Framework	Undertaken August 2005 as part of the appraisal of the Core Strategy and Development Policies. Local Plan objectives reappraised in September 2014.	
B2 Developing the options	Outlined in section 1.3	The policy context has changed significantly during the plan development process, particularly the requirement to develop a target for housing numbers, and this has required several reviews of options for housing provision.
B3 Predicting the effects of the Local Plan B4 Evaluating the effects of the Local Plan	Appraisal of initial strategic options completed August 2005, as part of the appraisal of the Core Strategy and Development Policies.	The Strategic options appraisal was complex because of the different types of options. Some of the options were not strategic alternative options as

B5 Considering ways of mitigating adverse effects and maximising beneficial effects	Appraisal of land allocations options completed December 2007, and additional suggested site options in May 2009. Appraisal of strategic housing options undertaken alongside	described in the guidance, but were appraised to provide guidance in policy development. Information used in appraising site options and policies is
	housing targets consultation in February/March 2012. Appraisal of further strategic site options undertaken in February 2013 as well as a number of smaller SHLAA sites. Additional site appraisals undertaken in July 2013.	discussed in the paragraphs below this table. Additional data issues are discussed in the significance criteria which are contained in Appendices 7 and 8.
	The current document draws reviews and draws together all the previous site appraisals. Policies originally appraised in the SA/SEA of the Preferred Options in 2007, and updated as necessary in the current document.	
B6 Proposing measures to monitor the significant effects of the Local Plan	Significant effects indicators to be included in the Local Plan Annual Monitoring Report as detailed in Section 6 of this report.	Monitoring is resource intensive and therefore needs to be realistic and measurable.

## The testing process

Sustainability Appraisal is an objectives-led process. This means that the potential effects of a plan are tested against a series of objectives for sustainable development (e.g. an objective *to use resources efficiently*). The development and detail of these objectives (called the **appraisal framework**) are described in section 2.4 below.

The SEA Directive requires the appraisal to identify significant effects of the Plan. In practice this involves assessing each aspect of the Plan against each of the sustainability objectives included in the appraisal framework. This was done using a formal matrix and has occurred at various different stages of policy and site appraisal.

The effect of the option or policy on the SA objective was scored as follows: Major positive  $\sqrt{\sqrt{}}$ ; positive  $\sqrt{}$ ; major negative **XX**; negative **X**; uncertain **?**; or neutral **O**. In testing the plan objectives we used the same symbols, except that no double tick or cross was used. The testing process assessed the effect in the short, medium and long term, and included a commentary on the reasons for making the judgement. At the bottom a matrix, a summary of the strength and weaknesses was provided, along with suggested mitigation measures. The full matrices and summary conclusions for sites are included in Appendix 7 and 8, for the objectives in Appendix 3 and for policies in Appendix 9.

#### Information used in the testing process

In completing the appraisal matrices a range of information was used. The assessment was based on the expert opinion of consultants and officers, drawing on the baseline data and analysis of key sustainability issues, relevant research and site specific information.

For site assessments (contained in Appendices 7 and 8), a wide range of other information was used. The key information sources were information for each site compiled by the council, some of which was in the form of GIS maps, and other background information for each site, which is shown in the Officer Recommendation Assessment published alongside the Local Plan. A range of other information sources were also used, and where relevant these are quoted in the appraisal matrices.

Since the site assessments were produced over a period from 2008 to 2013, there was a need to review the assessments to ensure the information provided was up-to-date, consistent and accurate. This review was undertaken in September 2014. The information review took account of a number of new or revised sets of information, including:

- Surface water flooding data
- Bus routes and frequencies data
- Landscape impact reports
- Land contamination information
- Green infrastructure opportunities
- Infrastructure requirements
- Consultation comments.

As a result of the review, the site summaries for sites included in the Local Plan Preferred Options report were updated in September 2014 to identify any changes required as a result of new information or changes in information, and to correct mistakes.

The full matrices for strategic sites (sites considered as options in February 2013 plus two additional sites<sup>26</sup> considered as options in July 2013) were also reviewed and updated at that time in order to support the process of choosing the preferred strategic options. Matrices for other sites were not updated at that time, and should be read in conjunction with the summaries for the relevant site, which present the significant sustainability effects for each site.

#### **Defining significant effects**

The SEA Directive requires the appraisal to identify significant effects. In our appraisal, major positive, positive, major negative and negative effects can all be defined as "significant". Significance is assessed in terms of the **size** of the effect (e.g. whether a development will use a large or small amount of greenfield space) and the **importance** (e.g. will it take place on an

<sup>&</sup>lt;sup>26</sup> North of Baldock (BA1) and North East of Luton (EL3 (previously 212a) and 212b and 212c))

important biodiversity site). In addition, the **cumulative** effect of a number of small insignificant effects, when taken together can produce a significant effect (e.g. the effect on landscape of a number of small developments in the countryside). Cumulative impacts are discussed further in section 3.3.

In order to make the assessment process of the sites consistent, significance criteria were developed before the assessment was undertaken. These defined the criteria used for identifying significant positive and negative effects for site, and are shown at the beginning of Appendix 7 and Appendix 8.

# **1.6 Consultation**

In order to meet the requirements of the SEA Directive and the UK Guidance, the planning authority must seek the views of the three designated environmental consultation bodies on the scope of the appraisal and on the draft report. It must also consult with the public on the draft report. The tables below show the consultation process to date and planned for the future. Appendix 10 lists comments made by the consultees on the previous stages of the process, and how they have been addressed.

Planning Document	Stage of SA	Date	Consultation methods
Core Strategy and Development Control Policies	Draft Scoping report: tasks A1-A4	June and July 2005	It was sent to a range of consultees, including the statutory consultees, who were given a five week period to respond with comments. It was also made available on the Council's website.
	Appraisal of Options	September and October 2005.	Options paper sent out to same consultees and made available on the Council's website. They were also directed to the Options Appraisal Report, which was available on the Council's website.
Land Allocations DPD	Draft Scoping report: tasks A1-A4	October and November 2007	It was sent to the statutory consultees, who were given a five week period to respond with comments. It was also made available on the Council's website.
	Development and Appraisal of Options	January- March 2008 June-August 2009	The Land Allocations Issues and Options paper was sent out to the same consultees and made available on the Council's website. They were directed to the SA/SEA report which was available on the

#### Table 10: Consultation process

			Council's website. A consultation meeting for key stakeholders was held on 19 <sup>th</sup> March 2008 to comment on the appraisal of the Issues and Options. The Additional Suggested Sites Issues and Options and the Housing Growth Targets documents were also sent out to the same consultees and made available on the Council's website.
			They were directed to the relevant SA/SEA reports which were available on the Council's website.
Core Strategy	Development and Appraisal of Options	February- March 2012	In developing the Growth Targets options, a series of four consultation meetings were held in November 2011 with a range of stakeholders. The consultation documents were sent out to statutory consultees and other key stakeholders, and made available on the Council's website. The Appraisal Report was also available on the Council's website.
Local Plan	Development and Appraisal of Housing Options	February / March 2013 and July 2013	The Housing Options consultation documents were sent out to statutory consultees and other key stakeholders, and made available on the Council's website. The Housing Options Appraisal Report was also available on the Council's website.
	Preferred Options	December 2014 / January 2015	The Preferred Options consultation documents were sent out to statutory consultees and other key stakeholders, and made available on the Council's website. The Preferred Options Appraisal Report will also be available on the Council's website.

# 2. Context, baseline and sustainability objectives

# 2.1 North Hertfordshire – overview

The following gives a brief profile of the district. More detailed baseline information is discussed in 2.3 below.

#### **Environment**

North Hertfordshire comprises a broad band of 375km<sup>2</sup> of attractive undulating countryside following the chalk escarpment of the Chiltern Hills and East Anglian Heights, which are separated by the 'Hitchin Gap' through which the East Coast Main Line railway passes. This ridge forms the watershed between the river basins of the Thames and the Wash. The highest point is Telegraph Hill at Lilley, at 184m above sea level and the lowest point of 32m above sea level is where the River Rhee leaves the district north of Ashwell. Most of the rural area is farmland, although there is some woodland, especially in the west of the district. Part of the district around Lilley and Hexton is within the Chilterns Area of Outstanding Natural Beauty. The district contains a variety of habitats for wildlife and plants, including areas of high biodiversity - notably the chalk grasslands and chalky boulder clay woodlands and meadows in the east of the district, the oak and hornbeam woodlands of the west of the district and the wet meadows and fens along the River Hiz and its tributaries.

The district has four main settlements: the historic market towns of Hitchin, Baldock and Royston and the world's first Garden City, Letchworth. It also includes most of the Great Ashby estate, which is part of the urban area of Stevenage, and numerous villages and hamlets. The district has 35 civil parishes and two unparished areas (Hitchin and Baldock). All the towns and many of the villages have historic areas and buildings; there are 40 conservation areas and approximately 2750 listed buildings. The district has a long history of human habitation and is crossed by the prehistoric lcknield Way. It also contains many ancient monuments, including the Iron Age Ravensburgh Castle at Hexton, the largest fort in south-east England.

In common with the rest of the world, the district needs to look at how to minimise the impacts of climate change, both by minimising the contribution human life makes to climate change and by adapting to new climate patterns. Whilst the district is highly unlikely to be directly affected by rising sea levels (although if all the world's ice sheets melted, Hitchin and Royston would be submerged), the changing climate will have a profound effect on our water and food supplies and way of life in general.

## Society

The district has a population of about 127,100<sup>27</sup> people. Just over 75% of the population live in the four towns or Great Ashby. A combination of factors, including people living longer, fewer people living in each home, proximity to London and relatively low interest rates have been causing housing costs to rise. The cost of housing relative to local incomes in the district is high and is beyond the

<sup>&</sup>lt;sup>27</sup> From 2011 census

reach of many, especially young adults. This is reflected in a skewed age profile - the district has significantly fewer people aged 18 - 30 than it does under 18s and over 30s.

All the towns have a range of sport, recreation and community facilities, schools and libraries. Knebworth, the largest village, also has a library. There are three public indoor swimming pools, two public outdoor swimming pools and two major leisure centres. There are several museums and a three screen cinema at Letchworth Garden City. There are several community and village halls across the district.

#### Economy

The district has good rail and road links. There are five stations in the district and one just 300m outside it (Ashwell & Morden). Direct services from the district's stations run north to Peterborough, north east to Cambridge and King's Lynn and south to London and Hertford. There are direct rail services between each of the stations in the district and also to Stevenage for connections to the inter-city service to the north east and Scotland. However, there are no rail links from the district's stations to the west. There is a range of local bus services, although services can be infrequent, particularly in the rural area. The A1 from London to Edinburgh passes through the district, and for most of its length in the district is a motorway. The A505 is the main east-west route, from Leighton Buzzard to the M11 near Duxford. Other main roads include the A600, A602 and A507. Car usage and ownership is high in the district, and traffic congestion is seen as one of the areas where residents would most like to see improvements<sup>28</sup>.

The district is also affected by two international airports, London Luton Airport immediately adjoining the district boundary to the west and London Stansted Airport a little further away to the east. They are a source of employment and bring economic benefits, but they also bring environmental damage and nuisance from noise, air pollution and vibrations, both from the air traffic itself and from land traffic to and from the airports. Both airports are looking to expand, which would have an impact on the district.

There is no one dominant centre serving the district. Hitchin town centre is the largest retail destination, followed by Letchworth and there are large employment areas in Letchworth, Hitchin and Royston. There are traditional markets in Hitchin, Baldock and Royston and Business Improvement Districts are currently operating in Hitchin, Letchworth Garden City and Royston. The district's settlements have a complex system of interdependencies with each other and with surrounding larger towns, notably Stevenage, Luton, Cambridge, Welwyn Garden City, Milton Keynes and London. A significant proportion of the district's population commutes to these larger centres for work and for shopping. There is significant leakage of retail expenditure from the district's population using retail centres elsewhere. In the rural areas, there are a number of village shops and services, although these have declined in recent years.

<sup>&</sup>lt;sup>28</sup> Best Value Performance Indicator Survey 2003/04

# 2.2 Links to other policies, plans and programmes

Task A1 of the appraisal process involves identifying other relevant policies, plans, programmes and sustainability objectives.

Relevant documents at international, national, regional and local level have been reviewed. For each document the following information has been collated:

- Key objectives relevant to the Local Plan and SA
- · Key targets and indicators relevant to the Local Plan and SA
- Implications for the Local Plan
- Implications for SA

This information has been used to inform the subsequent stages of the process, which are covered in later sections of this document:

- identification of sustainability issues (task A3);
- development of the SA framework (task A4); and
- Baseline review (task A2).

The review was updated in July 2012 to reflect the changes in the planning system, with minor updates in September 2014. It is shown as Appendix 1 to this report.

## 2.3 Baseline review

Task A2 of the appraisal process involves collecting relevant social, environmental and economic baseline information and producing a characterisation of North Hertfordshire.

As its name implies, the baseline review describes the current social, economic and environmental conditions in the District. The Practical Guide notes that baseline information provides the basis for predicting and monitoring effects and helps to identify problems and alternative ways of dealing with them<sup>29</sup>.

Collecting baseline information therefore contributes to the effectiveness of the appraisal. The aim is to collect information relating to each of the sustainability objectives. However, in reality there will be gaps in data availability. The Practical Guide comments that *not all information may be available immediately. The SEA team may need to consider whether improvements are needed to current information collection to fill existing gaps.*<sup>30</sup>.

<sup>&</sup>lt;sup>29</sup> See page 27 of the guidance

<sup>&</sup>lt;sup>30</sup> See page 50 of the guidance

The baseline review meets the requirements of the SEA Directive to provide information on *the environmental characteristics of the area likely to be affected*<sup>31</sup>.

The baseline review for North Hertfordshire was fully updated in January 2009 and reviewed and partly updated in December 2012. It is included as Appendix 2. It summarises data for a series of indicators associated with each of the sustainability appraisal objectives. Where it is available, the review also gives comparable data for Hertfordshire, the East of England region, and the UK.

# 2.4 Sustainability Issues

Task A3 of the appraisal process involves identifying key sustainability issues for the SA to address.

The identification of sustainability issues helps to define key issues for the Local Plan and develop sustainable plan objectives and options and also provides useful information for the sustainability appraisal process itself. It informed stage B of the process where options and polices were tested against the appraisal objectives. For example, when testing options for development in villages, information that *access to services for those in villages without a car* is a sustainability problem informed the judgements made in the testing process and influenced the choice of options.

The identification of sustainability issues meets the requirements of the SEA Directive to identify *any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance*<sup>32</sup>.

A list of sustainability issues was developed from the review of plans, programmes and policies. The list was then refined, based on discussions with the Officer Steering Group at a meeting on May 18<sup>th</sup> 2005, which included other sources of information. It was then updated in January 2009 along with the baseline review. It was also updated by the Council as part of the SA/SEA of the Core Strategy in May 2011. This was then further updated by CAG Consultants in June 2012 and reviewed with a minor update in September 2014. The revised list is shown in Appendix 2 and is summarised in the table below.

#### Table 11 Key sustainability issues

ECONOMIC ACTIVITY
Difficulties in competing with large urban centres for provision of employment and facilities
Promotion of <b>rural tourism</b> . Visitors can be important to rural areas, but the District is not seen as a prime tourist location.
Need to provide more <b>high quality employment</b> in the District. This will help reduce the disparity between local income and that of commuters, and to reduce the environmental impacts of commuting. One cause of this is the high cost of housing; employers don't see the District as a location of choice. Recognises future growth likely to be in knowledge based economy and need for diversification of economy.
Recruitment of <b>skilled workers</b> : within rural Hertfordshire 15% of employers report difficulty in recruiting the skills they need. This compares with a 10% average for Hertfordshire and as little as 2% in the south of the County. Equally19% of Hertfordshire firms report that a lack of skilled labour is a limiting factor in increasing output.

<sup>&</sup>lt;sup>31</sup> Annex1 (c)

<sup>&</sup>lt;sup>32</sup> Annex 1(d)

#### LAND USE AND DEVELOPMENT PATTERNS

The National Planning Policy Framework sets out a presumption in favour of **sustainable** development i.e. that new development can be a positive thing, but only when set within a sustainability framework. Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the Framework taken as a whole; or specific policies in the Framework indicate development should be restricted. It notes that planning should not just be about scrutiny but a creative exercise in finding ways to enhance and improve places. It should include people and communities.

The need to provide additional housing for local needs, and the wider needs of the housing market which affects the District will require the use of **greenfield sites** and put significant pressure on the environment and quality of life in the District. The housing target for this plan is **14,200** dwellings, representing 12,100 as North Hertfordshire's own objectively assessed need for development and 2,100 dwellings towards the unmet need for housing from Luton.

Population and mobility factors have changed the **function of villages** from employment service centres to dormitory/residential functions reducing their social and physical diversity.

The high levels of journeys and complex settlement pattern means that it is difficult to maintain a commercially viable **passenger transport** for journeys other than to London.

#### ENVIRONMENTAL PROTECTION

Proposed **housing developments** discussed above, plus the proposed expansion of London Luton and Stansted airports will have a significant impact on the District's environment.

Pressures on locally significant **habitats and species** in the District. These include fragmentation of habitats, loss of corridors and the direct impacts of agriculture and new development, including waste water treatment and water extraction, discussed further below.

The District's rich heritage of market towns and the Garden City certainly suggest that there are local **landscape issues** which will arise over more detailed site selection.

Quality of **surface and ground water** is threatened by the water supply needs and drainage from future developments. Adequate supply for future developments is also an issue.

North Hertfordshire is in an area of groundwater sensitivity because of its location at the head of both the River Ouse and Thames catchments A large proportion the district is in a **Drinking Water Safeguard Zone.** Small parts of the district are also in a Groundwater **Safeguard Zone** (SgZ). These non-statutory zones are where action to address water contamination will be targeted, so that extra treatment by water companies can be avoided. Safeguard zones are one of the main tools for delivering the drinking water protection objectives of the Water Framework Directive.

There are identified constraints on sewerage infrastructure in Stevenage and possibly in Royston. Development of large sites in Royston and Stevenage should not proceed until specific solutions to STW capacity issues are determined and agreed by Anglian Water and the Environment Agency.

#### CLIMATE CHANGE

**Transport use** is a significant contributor to global warming. Journey lengths are above the county average for work and leisure journeys in North Hertfordshire/Stevenage, and there is a high car use for the school run.

**Climate change** is a major environmental issue. NHDC has signed the Nottingham Declaration and to committed itself to reducing the District's contribution to global warming and climate change.

#### A JUST SOCIETY

Whilst the District is relatively prosperous there are pockets of income and/ or multiple **deprivation** in relation to national standards. In the towns these occur in parts of Hitchin and Letchworth. In the rural areas specific issues are isolation and lack of access to services.

There has been a reduction in **village services and employment** over the last 20 years. This particularly affects the elderly and young people. The number of households in the area with an elderly person in it is higher than the national average at 34%. This rises to 43% in some parts of the District. Some villages have high percentages of young people that have limited access to services. This is because of lack of planned recreational activities within villages and limited public transport to

larger settlements.

The same issue applies to elderly and young people living in some neighbourhood areas of our towns. There is a need to improve supply of high-quality **affordable housing**. The need for affordable housing has been exacerbated by insufficient development of affordable units over the last decade. Coupled with significant inflation in the housing market the gap has widened between the 'haves' and 'have-nots'. Specific issues on affordable housing include key worker housing, housing for young people and the disabled.

Housing growth for the district is a key sustainability issue, in terms of meeting need and demand, but also in relation to **environmental impacts of growth (**e.g. water use, transport, CO2 emissions, impacts on local environmental guality etc).

NHDC is generally very safe, but **fear of crime** is an issue in the District.

Generally speaking across all age groups the population of Hertfordshire enjoys good **health** compared with national averages. This however masks some areas at ward or sub-ward level of significant deprivation and poorer health status.

**Noise** from air and road transport has a significant effect on quality of life in the District. Proposed developments will have significant additional impacts.

#### **RESOURCE USE AND WASTE**

Hertfordshire has the highest domestic **water use** in the country. The Rye Meads Scoping Report notes that there are significant concerns for the availability of water resource in the Upper Lee catchment, which services part of the District. It notes that *new water resources within the Upper Lee CAMS area are not available to meet any increased demand generated by the proposed new housing developments*.

However, the water companies indicate that it is possible to meet the requirements of the housing growth targets, subject to measures outlined in the WCS, including high levels of water efficiency in development. The WCS also specifically includes measures to protect the sites of European importance. It is important that these measures are included in the requirements on developers. Sales of **sand and gravel** in South East England have almost halved since 1973. Sales of sand and gravel from extraction in Hertfordshire have decreased by 40% since 1990. The latest estimates for 2001 show sales at 1.67 million tonnes. However, the most recent figures available (1997) show that Hertfordshire was a net importer of sand and gravel with consumption exceeding sales by 0.356mt. The District has significantly improved its **recycling** performance in recent years. However, there is still a need for further improvement and a need to reduce overall waste arisings.

# 2.5 The sustainability appraisal framework

Task A4 of the appraisal process involves developing the SA framework, consisting of the sustainability objectives, indicators and targets.

Sustainability Appraisal is an objectives-led process. This means that the potential effects of a plan are tested against a series of objectives for sustainable development (e.g. an objective *to use resources efficiently*).

Along with their associated indicators and any targets (which are shown in the baseline review in Appendix 2), the objectives form the Appraisal Framework. The Practical Guide suggests that planning authorities may also choose to include more detailed sub-objectives and related indicators in their SA Framework. Sub-objectives can help to ensure that all the key issues to be considered in the SA are incorporated in the SA Framework. An example of a sub-objective for resource efficiency could be to reduce water use.

It should be noted that the SA objectives are distinct from the Plan objectives though they may in some cases overlap with them.

An initial set of objectives and sub-objectives was produced by the consultants, for the appraisal of the Core Strategy and Development Policies, based on the following sources:

- Objectives used in the sustainability appraisal of the East of England Plan<sup>33</sup>. These were derived from objectives from the Sustainable Development Framework for the East of England.
- Priorities defined in the North Hertfordshire Community Strategy
- Information on issues and objectives from the context review and the baseline data
- The objectives were cross-checked against the priorities in the UK Government Sustainable Development Strategy.<sup>34</sup>

It was then refined, based on discussions with the Officer Steering Group at a meeting on May 18<sup>th</sup> 2005. Some amendments were also made to take account of comments received during the public consultation, and as a result of the appraisal of the Planning Obligations SPD.

Finally the framework was reviewed again in December 2012. This review took account of the review of plans, programmes and policies (particularly the introduction of the National Planning Policy Framework), and of key sustainability issues. It was not considered that any changes were needed to the framework, as it meets the requirements of the NPPF and the other new plans, programmes and policies and addresses new sustainability issues identified.

This framework was used for the **appraisal of objectives**, **strategic alternatives and policies** and is shown in the table below. The objectives which address the issues which are required to be covered by the SEA Directive<sup>35</sup> are shown underlined.

#### Table 7: Appraisal framework

SA Objective <sup>36</sup>	SA Sub Objective: will the policy or proposal help to		
ECONOMIC ACTIVITY			
1 Achieve sustainable levels of prosperity and economic growth	<ul> <li>maintain a diversified economy, with increased resilience to external shocks?</li> <li>encourage new business to start-up and thrive in the District?</li> <li>support and encourage the rural economy and diversification?</li> <li>support and promote sustainable tourism in towns and rural areas?</li> <li>improve the quality of local jobs available to people in the District?</li> </ul>		

<sup>&</sup>lt;sup>33</sup> East of England Plan: Sustainability Appraisal Report, Levett-Therivel Sustainability Consultants and Land Use Consultants, November 2004

<sup>&</sup>lt;sup>34</sup> Securing the Future, March 2005

<sup>&</sup>lt;sup>35</sup> listed in Annex 1(f)

<sup>&</sup>lt;sup>36</sup> those relevant to the SEA Directive are shown underlined

<ul> <li>increase the skills base?</li> <li>make the cost of housing more affordable to those employed in the District?</li> <li><b>LAND USE AND DEVELOPMENT PATTERNS</b></li> <li>2(a) Minimise the development of greenfield land and other land with high environmental and amenity value?</li> <li>maximise reuse of vacant buildings and derelict land?</li> <li>maximise the loss of the best and most versatile agricultural land?</li> <li>reduce quantity of unremediated contaminated land?</li> <li>provide access to green spaces</li> <li>provide opportunities for people to come into contact with and appreciate wildlife and wild places?</li> <li>maintain/improve the public right of way network?</li> <li>(c) Deliver more sustainable location patterns and reduce the use of freight movements?</li> <li>avoid exacerbating local traffic congestion?</li> <li>provide affordable, accessible public transport in towns and in rural areas?</li> <li><b>ENVIRONMENTAL PROTECTION</b></li> <li>3(a) Protect and enhance biodiversity</li> <li>support and maintain extent of wetland habitat and river habitats?</li> <li>support and maintain extent of wetland habitat and river habitats?</li> </ul>				
the District?         2(a) Minimise the development of greenfield land and other land with high environmental and amenity value?       • promote the use of brownfield sites and if brownfield sites are not available, land of low environmental and amenity value?         amenity value?       • maximise reuse of vacant buildings and derelict land?         2(b) Provide access to green spaces       • provide/improve access for all residents of the District to green spaces?         2(c) Deliver more sustainable location patterns and reduce the use of motor vehicles       • locate development so as to reduce the need to travel?         2(c) Deliver more sustainable location patterns and reduce the use of motor vehicles       • locate development so as to reduce the need to travel?         2(c) Deliver more sustainable location patterns and reduce the enduce the need to travel?       • reduce car reliance, encourage walking, cycle, bus, and train use?         3(a) Protect and enhance biodiversity       • protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats?         3(b) Protect and       • protect and enhance landscapes, especially those of historic,				
2(a) Minimise the development of greenfield land and other land with high environmental and amenity value? <ul> <li>promote the use of brownfield sites and if brownfield sites are not available, land of low environmental and amenity value?</li> <li>maximise reuse of vacant buildings and derelict land?</li> <li>minimise the loss of the best and most versatile agricultural land?</li> <li>reduce quantity of unremediated contaminated land?</li> </ul> 2(b) Provide access to green spaces <ul> <li>provide/improve access for all residents of the District to green spaces?</li> <li>provide opportunities for people to come into contact with and appreciate wildlife and wild places?</li> <li>maintain/improve the public right of way network?</li> </ul> 2 (c) Deliver more sustainable location patterns and reduce the use of motor vehicles <ul> <li>locate development so as to reduce the need to travel?</li> <li>reduce road freight movements?</li> <li>avoid exacerbating local traffic congestion?</li> <li>provide affordable, accessible public transport in towns and in rural areas?</li> </ul> 3(a) Protect and enhance biodiversity <ul> <li>protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats?</li> <li>support and maintain extent of wetland habitat and river habitats?</li> </ul>				
development of greenfield land and other land with high environmental and amenity value?available, land of low environmental and amenity value?amenity value?maximise reuse of vacant buildings and derelict land?2(b) Provide access to green spacesprovide/improve access for all residents of the District to green spaces?2(c) Deliver more sustainable location patterns and reduce the use of motor vehiclesother teland, wild places?2(c) Deliver more sustainable location patterns and reduce the use of motor vehiclesother teland, movements?3(a) Protect and enhance biodiversityorther teland species, especially those designated as being of importance, and provide opportunities for creation of new habitats?3(b) Protect and enhance biodiversityorther teland species, especially those of historic,3(b) Protect and sl(b) Protect andorther teland enhance landscapes, especially those of historic,				
green spacesspaces?green spacesprovide opportunities for people to come into contact with and appreciate wildlife and wild places?2 (c) Deliver more sustainable location patterns and reduce the use of motor vehicleslocate development so as to reduce the need to travel?avoid exacerbating local traffic congestion? provide affordable, accessible public transport in towns and in rural areas?3(a) Protect and enhance biodiversityor protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats?3(b) Protect and enhanceor protect and enhance landscapes, especially those of historic,				
sustainable location patterns and reduce the use of motor vehicles• reduce car reliance, encourage walking, cycle, bus, and train use? • reduce road freight movements? • avoid exacerbating local traffic congestion? • provide affordable, accessible public transport in towns and in rural areas?ENVIRONMENTAL PROTECTION3(a) Protect and enhance biodiversity• protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats? • support and maintain extent of wetland habitat and river habitats?3(b) Protect and • protect and • protect and enhance landscapes, especially those of historic,				
3(a) Protect and enhance biodiversity• protect habitats and species, especially those designated as being of importance, and provide opportunities for creation of new habitats? • support and maintain extent of wetland habitat and river habitats?3(b) Protect and • protect and enhance landscapes, especially those of historic,				
enhance biodiversityof importance, and provide opportunities for creation of new habitats?• support and maintain extent of wetland habitat and river habitats?3(b) Protect and• protect and enhance landscapes, especially those of historic,				
<u>3(b) Protect and</u> • protect and enhance landscapes, especially those of historic,				
3(c) Conserve and where appropriate, enhance the historic environment• conserve and enhance the historic built character of the District's town's and villages? • protect sites of archaeological and historic importance, whether designated or not?				
3(d) Reduce pollution from any source• improve the water quality of rivers and groundwater supplies? • achieve good air quality? • reduce ambient noise, especially from traffic? • reduce light pollution in the District? • protect soil quality?				
CLIMATE CHANGE				
4(a) Reduce greenhouse gas emissions• minimise energy consumption by transport and in buildings? increase proportion of energy generated by renewable sources? • encourage use of local suppliers and the consumption of local produce?				
<u>4(b) Improve the</u> • reduce vulnerability to climate change, exploit any benefits?				

District's ability to adapt to climate change	avoid development in areas at risk from flooding?			
A JUST SOCIETY				
5(a) Share benefits of prosperity fairly	<ul> <li>reduce disparities in income levels?</li> <li>contribute to regeneration of deprived areas (estates in Letchworth and Hitchin)?</li> <li>provide employment and other opportunities for unemployed, especially long term unemployed and the disabled?</li> <li>encourage entrepreneurial activity in deprived areas?</li> </ul>			
5(b) Provide access to services and facilities for all	<ul> <li>provide access to services and facilities without need to use a car?</li> <li>retain rural services, especially shops, post offices, schools, health centres and bus services?</li> <li>recognise the needs of specific groups such as minority ethnic groups, the young, the elderly and the disabled?</li> </ul>			
5(c) Promote community cohesion	<ul> <li>support development of voluntary sector?</li> <li>encourage development of community run business?</li> <li>encourage people's feelings of belonging, for example by providing community meeting places?</li> <li>recognise and value cultural and ethnic diversity?</li> </ul>			
5(d) Increase access to decent and affordable housing	<ul> <li>help improve the quality of the housing stock and reduce the number of unfit homes?</li> <li>increase access to affordable housing, particularly for the young, the disabled and key workers?</li> </ul>			
5(e) Reduce crime rates and fear of crime	<ul> <li>encourage crime reduction, particularly through the appropriate design of new development?</li> <li>help reduce the fear of crime?</li> </ul>			
5(f) Improve conditions and services that engender good health and reduce health inequalities	<ul> <li>help promote healthy lifestyles?</li> <li>improve access to health services by means other than private cars?</li> <li>reduce ambient noise near residential and amenity areas?</li> <li>reduce road accidents?</li> <li>reduce accidents and damage from fires?</li> </ul>			
5(g) Increase participation in education and life-long learning	<ul> <li>improve access to skills learning by young people?</li> <li>improve access to skills learning by adults?</li> </ul>			
5(h) Maintain and improve culture, leisure and recreational activities that are available to all	<ul> <li>increase access to culture, leisure and recreational activities?</li> </ul>			
RESOURCE USE AND WASTE				
6(a) Use natural resources efficiently;	<ul><li>minimise the demand for raw materials?</li><li>encourage sustainable design, use of sustainable building</li></ul>			

reuse, use recycled where possible	<ul> <li>materials and minimise wastage caused by construction methods</li> <li>limit water consumption to levels supportable by natural process and storage systems?</li> <li>protect groundwater resources?</li> <li>promote sustainable drainage systems?</li> <li>reduce minerals extracted and imported?</li> </ul>			
6(b) Reduce waste	reduce, reuse or recycle waste generated?			
TOWN CENTRES				
7 Promote sustainable urban living	<ul> <li>encourage wider range of shops and services in town centres?</li> <li>encourage more people to live in town centres?</li> <li>encourage mixed use developments in town centres?</li> <li>improve transport connections in, and to, town centres?</li> <li>encourage synergy in land uses, which supports the continued and enhanced viability of a wide range of shops and services?</li> <li>protect or improve the quality of the public realm in towns?</li> </ul>			

A modified version of this framework was used for the appraisal of sites (including strategic site alternatives). This modified framework includes specific sub-questions related to site allocations and excludes issues which are addressed in the Local Plan and cannot be influenced by site allocations. It was also modified in response to consultation comments on the Land Allocations SA/SEA Scoping Report (September 2007). The modified framework is shown at the beginning of Appendices 7 and 8.

# 4. Assessing the effects of options

As outlined earlier, options development (known as alternatives in the language of the SEA Directive, but referred to as options in this report to reflect common practice in planning in the UK) is an important part of the SA/SEA process. Table 6 summarises the options development process through the different stages of the Local Plan. Although the appraisal process for options has already been discussed in section 1.3, for the sake of completeness, the following paragraphs summarise how options were tested at each stage.

#### 4.1 Strategic Options

Strategic options for rural areas and settlement patterns, housing and employment and tourism were outlined, appraised and consulted on in 2005.<sup>37</sup> The appraisal of the options<sup>38</sup> was published again in 2007, with the Council's response. These responses were updated in 2014 to reflect changing circumstances in the Spatial Strategy Options Assessment document.<sup>39</sup> This document gives a summary of the process of developing strategic options, and outlines which strategic options were taken forward, and the reason why. It also includes an appraisal of additional strategic options relating to the Green Belt, and is included as Appendix 4 to this report.

#### 4.2 Housing targets and strategic site options

The District Council produced a consultation paper in February 2012<sup>40</sup> outlining eight different options for housing growth, ranging from 15,800 new homes down to 2,500 homes. The SA of the options is included for information in this current report as Appendix 5.

However, further work was required on developing housing targets, as the National Planning Policy Framework, published in March 2012, identified<sup>41</sup> the requirement for preparation of a Strategic Housing Market Assessment (SHMA) to assess the full housing needs of the district. The SHMA needed to meet household and population changes, taking account of migration and demographic change. As a result, further consideration needed to be given to evidence for a potential housing target.

Therefore, the Council undertook further work on a suitable housing target, taking account of evidence in North Hertfordshire District Council SHMA (2012) and the SA/SEA of housing targets (March 2012). Potential targets were identified and consulted on in <u>Housing Options Growth Levels</u>

<sup>&</sup>lt;sup>37</sup> See http://www.north-herts.gov.uk/options\_paper\_050823\_\_final\_.pdf

<sup>&</sup>lt;sup>38</sup> Alongside the Core Strategy Preferred Options report.

<sup>&</sup>lt;sup>39</sup> North Hertfordshire District Council October 2014

<sup>&</sup>lt;sup>40</sup> See <u>http://www.north-herts.gov.uk/index/environment and planning/planning/planning policy and projects-</u> 2/core-strategy.htm

<sup>&</sup>lt;sup>41</sup> Paragraph 159

<u>and Locations 2011 – 2031</u>, published in February 2013. These were within the same range as the February 2012 targets.

The February 2013 document also identified, appraised and consulted on options that would in combination contribute to delivering a housing target. An additional document <u>Housing Additional</u> <u>Locations Options</u>, published in July 2013, identified two additional strategic site options. As part of the process of deciding on the preferred site options, the appraisals of strategic site options were reviewed and compared. The updated appraisals are included as Appendix 6 of this report.

#### 4.3 Site options

Site options were outlined, appraised and consulted on in the February 2013 document. Additional sites which arose through the consultation process were then published, appraised and consulted on in <u>Housing Additional Locations Options</u> in July 2013. The majority of the non-strategic sites are already known and have been consulted on and appraised through the <u>Issues and Options and</u> <u>Additional Suggested Sites documents and associated SA/SEAs<sup>42</sup> from 2008.</u>

The Local Plan Preferred Options document includes a list of preferred site locations and for the first time excludes specific sites from consideration, along with the reason for doing so. Detailed information on why particular sites have been included or excluded is contained in the Site Selection Matrix (published alongside the Local Plan), which has been informed by this Sustainability Appraisal and many other evidence documents including consultation comments, Green Belt Review,, and landscape assessments<sup>43</sup>.

Summary information from the appraisal of all the sites included in the Preferred Options Local Plan document, along with detailed matrices, is contained in Appendix 7.

Summary information from the appraisal of all the sites not carried forward, along with detailed matrices, is contained in Appendix 8.

<sup>&</sup>lt;sup>42</sup> Documents available here: http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-2/land\_allocations-2/land allocations sustainability appraisal.htm

<sup>&</sup>lt;sup>43</sup> Full details of the evidence base can be found on http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-2/evidence\_base.htm

# **5 Predicting the effects of the Plan**

#### 5.1 Plan policies

The policies contained in the Preferred Options Local Plan have been in a process of development since the start of the Core Strategy process in 2005. Some of the policies were included in the Preferred Options Core Strategy and Development Control Policies published for consultation in September 2007, and were appraised at that time (or as part of an earlier iteration produced in November 2006). Other policies are new or significantly changed, and have been appraised or reappraised in August and September 2014. With each appraisal recommendations were made to improve the sustainability of the policy. The appraisal matrices, along with the recommendations, and changes made as a result are included in Appendix 9.

#### 5.2 Overall effects of the Plan

As the Plan objectives make clear, the role of the Local Plan is to provide for homes and jobs and associated services, development and infrastructure, while minimising environmental impacts and identifying opportunities for environmental improvement. The overall effects of the Plan are therefore a combination of the effects of the site allocations as they are supported and modified by the policies. The table below outlines the combined effects of the Plan on each of the sustainability objectives.

#### Table 12: Significant sustainability effects of the plan

SA Objective	Significant sustainability effects		
1 Achieve sustainable levels of prosperity and economic growth	Provision of additional employment sites will meet the need for local employment provision, as identified by the Employment Land Review <sup>44</sup> . Village housing sites may contribute to viability of local services. The north Baldock and north Letchworth strategic sites may also contribute to the viability of services in the towns. Some of the strategic sites may also provide employment opportunities, or link with employment development, and policy ID2: Masterplans requires masterplans for key strategic sites which will address employment provision. In combination, all policies in the Economy and Town Centres chapter (ETC1-11) they are likely to support delivery of this objective. Overall, the Plan is likely to have a significant positive effect on this objective.		
2 (a) Minimise the development of greenfield land and other land with high environmental and amenity value	The great majority of the sites included in the preferred options are greenfield, including the strategic sites, and 14 other sites providing over 100 dwellings each. Therefore the plan will have a major significant negative effect on this objective.		

<sup>&</sup>lt;sup>44</sup> Employment Land Review Feb 2013 see http://www.north-

herts.gov.uk/index/environment\_and\_planning/planning/planning\_policy\_and\_projects-

<sup>2/</sup>evidence\_base/employment\_land\_review.htm

SA Objective	Significant sustainability effects
2 (b)Provide access to green spaces	There will be some loss of informal and formal recreation areas, and development of strategic sites will make open countryside further away for existing residents. However, all new development will be required to provide greenspace as defined in policy HC2: Green space and to provide green infrastructure as outlined in policy NE2: Green infrastructure and policy ID2: Masterplans requires masterplans for key strategic sites which will address open space provision. There are significant opportunities for the strategic sites to enhance and improve links to the countryside and to connect with new and existing green infrastructure. Overall, the Plan is likely to have a significant positive effect on this objective.
2(c) Deliver more sustainable location patterns and reduce the use of motor vehicles	The strategic sites are likely to be able to support new or improved bus services, footpaths and cycleways. They are also likely to be able to provide significant levels of service within the site. However, apart from the north Baldock site they are all more than 800m from the station and likely to result in increased car use for commuting and to access some services. This also applies to the village sites and other smaller edge of town sites. Policy T1: Sustainable transport requires sustainable transport within new developments. The overall effect of the Plan on this objective is unclear, but it is likely to be negative.
3(a) Protect and enhance biodiversity	A number of sites include wildlife sites (6 sites include wildlife sites or border them), and others are adjacent to them. There are 2 sites close to SSSIs. Policy NE3: Biodiversity and NE2: Green Infrastructure will provide significant protection and potential enhancement for biodiversity in development. However, for the amount of development proposed there is bound to be some loss of biodiversity and fragmentation of habitats, at least in the short to medium term. Each site should be assessed to identify ecological interests, and ensure that green corridors and important features such as hedges and mature trees are retained. Opportunities for habitat enhancement should also be sought. The effectiveness of this mitigation will determine the long term effects of the Plan on this objective.
3(b) Protect and enhance landscapes	Development of this scale is likely to have significant impacts on the character and quality of landscape and on local distinctiveness. Significant landscape impacts have been identified for all the strategic sites included in the Plan, and for some of the other large sites. A range of mitigation measures have been identified to reduce the impacts in each case (and this is supported by Plan policies such as NE1: Landscape and Environmental Protection and ID2: Masterplans), but overall the Plan is likely to have a major significant negative effect on this objective.
3(c) Conserve and where appropriate enhance the historic environment	There are a significant number of sites which impact on or contain historic features. There are 15 sites which border or are within conservation areas and approximately 20 <sup>45</sup> sites include

<sup>&</sup>lt;sup>45</sup> 23 sites include or border designated archaeological areas, some sites include more than one designated area.

SA Objective	Significant sustainability effects
	designated areas of archaeological interest, which will require further investigation. There are 3 sites which contain listed buildings and the east Luton strategic site is close to Putteridge Bury Historic Park and Gardens.
	A large number of other sites lie near or adjacent to heritage features, and in the case of the large sites may well impact on their setting. Development will require appropriate investigation and mitigation, but it is likely that development of this scale will have a negative effect on this objective.
3(d) Reduce pollution from any source.	Potential or probable land contamination was noted in a significant number of sites. These issues would require further investigation prior to development in order to avoid contamination of soil, groundwater and watercourses, as 38 sites are in Source Protection Zones 2 or 3.
	There are significant constraints on sewerage infrastructure in the Stevenage area. The strategic sites close to Stevenage would put increased pressure on the sewerage and water supply infrastructure, although the Rye Meads Water Cycle Study identifies potential solutions.
	There also may be issues with the capacity of sewerage infrastructure in Royton to accommodate the proposed levels of development.
	Policies NE7: Water quality and environment, NE8: Water Framework Directive and wastewater infrastructure and NE9: Contaminated land provide protection for groundwater and watercourses, and designated European sites which are close to the District.
	The initial construction phase for developments is likely to be disruptive for local residents and have significant negative noise and dust impacts in the short term.
	Development on this scale would inevitably result in increased light, air and noise pollution, particularly from the strategic sites. Policy D4: Air quality addresses air pollution issues. The Plan is likely to have a significant negative effect on this objective in the short term, but the medium and long term effect depends on how these issues are addressed in delivery.
4 (a) Reduce climate change emissions	Overall, new development on this scale will result in significant increases in carbon emissions, as will the additional car travel discussed in 2(c). However, the development of the strategic sites and other large housing sites provides significant opportunities for renewable and low carbon energy. Policy ID2: Masterplans requires masterplans to consider their viability for the strategic sites, though there is no requirement for other large sites. Policy NE4: Renewable energy development supports renewable energy development Overall, the Plan is likely to have a significant negative effect on this objective.
4 (b) Improve the District's ability to adapt to climate change.	The provision of green infrastructure will contribute to reducing the effects of rising temperatures. There is no specific

SA Objective	Significant sustainability effects
	requirement to consider the effects of rising temperatures in the policies, though it is an issue likely to be considered in the Design SPD. Surface water flooding has been identified as an issue for a significant number of sites, including all the strategic sites, and will need to be appropriately investigated and managed. A small number of the sites are at risk of flooding, falling within flood zones 2 or 3 and may require further investigation – fluvial flooding is addressed by policy NE6: Reducing flood risk, though it does not specifically mention surface water flooding. As it stands the Plan's effect on this objective is uncertain, as it depends on the degree to which development takes account of surface water flooding and increased temperatures.
5(a) Share benefits of prosperity fairly	The contribution the Plan is likely to make to employment provision, discussed under objective 1, is likely to provide opportunities for the long term unemployed. The north Letchworth strategic site is likely to contribute to the regeneration of the town, and the sites on the edge of Luton and Stevenage are likely to provide affordable housing for those in deprived areas of these cities. Overall the Plan is likely to have a significant positive effect on this objective.
5(b) Provide access to services and facilities for all.	The strategic sites and other large housing sites are likely to provide a range of community facilities within the development. Village developments are likely to support the retention of rural services. Policies ETC6: Town and local centres and ETC11: Scattered local shops, services and facilities in towns and villages protect village centres and services. Overall the Plan is likely to have a significant positive effect on this objective.
5(c) Promote community cohesion	The strategic sites and other large housing sites are likely to provide a range of community facilities, including community centres. However, they will have significant effects on existing communities, which could include impacts on views and local distinctiveness, increased traffic, and reduced access to open countryside. These impacts could affect community cohesion. Development will require appropriate planning and design and the active engagement with existing residents to mitigate the effects. Policy D3: Protecting living conditions addressed this issue. Policy ID2: Masterplans requires masterplans for the strategic sites to consider how the developments relate to existing communities; and how the new community will be encouraged to develop its own sense of identity. The overall effect of the Plan on this objective is uncertain, as it depends on how these issues are addressed in delivery.
5(d) Increase access to decent and affordable housing	The provision of 14,200 dwellings would include a significant proportion of affordable housing, as outlined in policy HDS3: Affordable housing. The requirement in ID2: Masterplans for masterplans to consider opportunities for self-build is also likely to increase access to affordable housing. The Plan is therefore likely to have a major significant positive effect on this objective.
5(e) Reduce crime rates and fear of crime	Policy D1: Design and sustainability requires proposals to design-out opportunities for crime and anti-social behaviour.

SA Objective	Significant sustainability effects		
	The overall effect of the Plan on this objective is uncertain, as it depends on delivery.		
5(f) Improve conditions and services that engender good health and reduce health inequalities	As discussed under 3(d), development on this scale would inevitably result in increased air and noise pollution, particularly from the strategic sites. Policy D4: Air quality addresses air pollution issues. A small number of the sites are adjacent to main roads and or railway lines. The noise and vibration is a significant health issue that would require mitigation.		
	The strategic sites are likely to include provision for health services.		
	The initial construction phase for developments is likely to be disruptive for local residents and have significant negative noise and dust impacts in the short term.		
	The Plan is likely to have a significant negative effect on this objective in the short term, but the medium and long term effect depends on how these issues are addressed in delivery.		
5(g) Increase participation in education and life-long learning	There would need to be increased secondary and primary provision to accompany development of this scale, and specific capacity issues have been identified for Baldock and Hitchin and some of the villages. However, the strategic sites and other large housing sites are likely to contribute towards additional provision. Village developments are likely to support the retention of village schools. The overall effect of the Plan on this objective is uncertain, as it depends on delivery, though it is likely to be positive.		
5(h) Maintain and improve culture, leisure and recreational activities that are available to all	Policy HC1: Healthy communities requires developers to make provision for new community, cultural, leisure and recreation facilities. All new development will be required to provide greenspace as defined in policy HC2:Green space and to provide green infrastructure as outlined in policy NE2:Green infrastructure, and policy ID2: Masterplans requires masterplans for key strategic sites which will address open space provision. The overall effect of the plan on this objective is likely to be positive.		
6(a) Use natural resources efficiently; reuse, use recycled where possible	Water resources and the provision of sewerage infrastructure to protect water resources have been identified as significant sustainability issues for the District. As noted in the Rye Meads Water Cycle Study, there are significant pressures on the water supply infrastructure for the majority of the District. The number of new homes proposed will put increased pressure on the infrastructure. The Water Cycle Study identifies solutions, which include high levels of water efficiency. Policy NE5: Delivering sustainable water supply addresses this issue.,		
	Appropriate sewerage infrastructure will need to be provided to support new development and protect watercourses and groundwater. This is a particular issue for sites adjacent to Stevenage, and possibly in Royston, and is addressed by policy NE8.		
	Policy D1:Design and sustainability supports the use of sustainable urban drainage systems (SuDS), although there are		

SA Objective	Significant sustainability effects			
	constraints on some sites, including some of the strategic sites. Due to the effect of additional demand for water resources, the Plan is likely to have a significant negative effect on this objective.			
6(b) Reduce waste	Policy D1: Design and sustainability promotes the efficient use of new materials from local or sustainable sources, together with the reuse and recycling of materials, though the details will be outlined in the Sustainable Design SPD. The overall effect of the plan on this objective will depend on the detail in the SPD, but is likely to be positive.			
7 Promote sustainable urban living	The majority of the sites included in the Plan are on the edge of towns. The north Baldock and north Letchworth strategic sites may contribute to the viability of services in the towns. However the residents of village sites and those with poorer accessibility may be more likely to use out of town supermarkets or facilities in other centres. Policy ET6: Town and local centres protects town centres. The overall effect of the Plan on this objective is uncertain, as it depends on delivery of the strategic sites.			

## 5.3 Assessment of cumulative effects

The SEA Directive requires consideration of secondary, cumulative and synergistic effects (which together are often called cumulative effects). This is because many problems arise from the accumulation of a large number of small and often indirect effects, rather than a few large and obvious ones.

Secondary effects are indirect effects, for example health effects of air pollution from transport.

**Cumulative effects** are the total result of environmental impact from a number of projects and activities. They arise for instance where several developments each have an insignificant effect, but together have a significant effect, or where several individual effects (e.g. noise, dust and visual) have a combined effect.

**Synergistic effects** are those which interact to produce a total effect greater than the some of the individual effects, for example progressive fragmentation of a wildlife habitat leading to areas too small to support wildlife.

An assessment of possible cumulative impacts of the Local Plan has been undertaken, which includes whether the impacts are significant and potential mitigation measures. The results are shown in the table overleaf.

Cumulative effect	Affected receptor	Causes	Significant?	Potential mitigation measures
Reduction in biodiversity and fragmentation of habitats	Wildlife habitats, particularly around towns	Development of greenfield and brownfield sites in rural areas and on the edge of towns	Potentially, depends on mitigation measures	Undertake ecological surveys for any developments of significant size, or where ecological interests have been identified, and seek opportunities to preserve and improve biodiversity, and retain and improve wildlife corridors.
Potential impact on water quality and wildlife habitats	Designated European wildlife sites (Lea Valley SPA and Ramsar Site) Rivers included in Rye Meads Study catchment and their habitats- the Lee, Mimram, Beane, Rib, Ash and Stort. Whaddon Brook (in the case of Royston STW)	Expansion of sewerage capacity at Rye Meads STW due to growth in this part of the region Increased water abstraction due to increased growth Possible pressures on sewerage infrastructure at Royston STW	Depends on mitigation measures.	Measures outlined in the Rye Meads Water Cycle Study. This includes adopting for new dwellings the Code for Sustainable Homes water efficiency targets of 105 l/p/d (as a minimum), and aiming for Defra's aspirational target of 130 l/p/d by 2030 in existing dwellings. The Study specifically includes measures to protect the sites of European importance. Development of large sites in Royston and Stevenage should not proceed until specific solutions to STW capacity issues are determined and agreed by Anglian Water and the Environment Agency.
Reduction in landscape quality	Landscape	Development of greenfield sites for housing at edge of towns and villages	Likely to be significant given the scale of development	Design schemes to mitigate landscape impacts, drawing on the 2013 Landscape Study and other site specific reports.
Damage and loss of heritage assets	Sites adjacent to ancient monuments, and close to Historic Parks and Gardens and in designated archaeological areas, conservation areas and listed buildings.	Development of sites containing assets	Depends on mitigation measures.	Undertake investigations prior to development to consider how to protect assets.
Climate change	Worldwide	Greenhouse gas	Increase of 14,200 new	Incorporate sustainable energy solutions in new

#### Table 13: Review of cumulative effects

SA/SEA of North Hertfordshire Local Plan Preferred Options 34

Cumulative effect	Affected receptor	Causes	Significant?	Potential mitigation measures
		emissions from increases in traffic from current and new housing and from energy use in new housing	dwellings is likely to have a significant impact.	developments.
Loss of tranquillity and increased air pollution	Rural areas and edge of towns	Increased traffic, new development in towns and villages, and expansion of Luton airport	Increase of 14,200 new dwellings is likely to have a significant impact.	Ensure provision of local facilities for large developments, and develop green travel plans, to ensure provision of public transport, and walking and cycling opportunities.
Increased demand for water and sewerage facilities	Groundwater, water resources and sewerage infrastructure	Increased population	Increase of 14,200 new dwellings is likely to have a significant impact.	As above
Increased demand for schools and other community facilities	Community facilities	Increased population	Increase of 14,200 new dwellings is likely to have a significant impact.	Ensure provision within large developments
Increased use of local shops and other businesses	Local businesses and economy	Increased population and local employment	Yes	None required
Improved provision of community facilities, including open space and recreational facilities	Community facilities and open space	Through developer contributions from new developments	Yes	None required as the overall effect is likely to be positive. (though there will also be a loss of some green and open spaces as a result of development, which will need to be mitigated by the provision of replacement open space and recreational facilities).
Reduction in community cohesion	Local communities	Large new developments on the edge of towns and coalescence with smaller villages	Unclear whether the overall impact will be significant, though may be so in the case of the strategic sites.	Local people should be engaged in the design of the developments, to reduce impacts and ensure that existing local communities benefit (for example through additional facilities). Produce Construction Management Plans to mitigate impacts of development of large sites on existing residents.

SA/SEA of North Hertfordshire Local Plan Preferred Options 35

Cumulative effect	Affected receptor	Causes	Significant?	Potential mitigation measures
Possible pollution of controlled waters(depending on effectiveness of mitigation)	Controlled waters (groundwater and watercourses)	Development of land affected by contamination and run off from new developments	Depends on mitigation measures.	Ensure appropriate investigations prior to development.
Possible surface flooding (depending on the effectiveness of mitigation)	Towns and villages	Development without adequate use of SUDS	Depends on mitigation measures.	Promote and require SuDS in new development Produce Surface Water Management Plans for sites where flooding has been identified as an issue

# 6. Monitoring

## 6.1 Purpose of Monitoring

Task B6 is to propose measures to monitor the significant effects of implementing the Local Plan . This is an important part of the appraisal and plan development process. The Practical Guide<sup>46</sup> notes that it has a number of benefits:

- It allows the actual significant effects of the implementation of the Strategy and Policies be tested against those predicted in the SA;
- It helps to ensure that issues that arise, including unexpected problems, can be identified and tackled;
- It helps further predictions to be made more accurately;
- It can contribute to baseline information for future plans.

## **6.2 Monitoring Process**

For the sake of efficiency and integration, North Hertfordshire District Council will include significant sustainability effects in future Annual Monitoring Reports. Where necessary, the Reports will also propose measures for addressing adverse effects, including unexpected problems. The significant sustainability effects indicators have been drawn from the indicators in the baseline data of this sustainability appraisal (which are linked to the sustainability objectives used in the appraisal). They aim to:

- Concentrate on the key sustainability issues identified in the appraisal;
- Provide information to identify when problems, including unexpected ones, arise;
- Contribute to addressing deficiencies in data availability identified in this appraisal.

An initial list of significant sustainability effects indicators will be included in the 2013/14 Annual Monitoring Report to be published in 2015.