



Centre for Sustainability

Dacorum Borough Council

Sustainability Appraisal (incorporating Strategic
Environmental Assessment)

Addendum to Working Note for the Emerging Core
Strategy

Additional Strategic Development Locations and Sites
Assessment

April 2010

Report Number: CPR653b

Authors: Tara Sethi, Clare Harmer and Rob Gardner

Quality reviewed: Rob Gardner

Client: Dacorum Borough Council

Copyright: TRL Limited April 2010

This report has been prepared for Dacorum Borough Council and is unpublished and should not be referred to in any other document or publication without the permission of Dacorum Borough Council. The views expressed are those of the author(s) and not necessarily those of Dacorum Borough Council.

CONTENTS

1	INTRODUCTION.....	2
1.1	BACKGROUND.....	2
1.2	ASSESSMENT METHODOLOGY	2
2	ASSESSMENT RESULTS	3
2.1	SHENDISH (NORTH).....	3
2.2	SHENDISH (SOUTH)	5
2.3	FELDEN.....	6
2.4	WEST HEMEL HEMPSTEAD (NORTH).....	7
2.5	WEST HEMEL HEMPSTEAD (SOUTH).....	8
2.6	MARCHMONT FARM	9
2.7	OLD TOWN.....	10
2.8	NASH MILLS	11

APPENDIX A – SA FRAMEWORK: INCLUDED IN THIS DOCUMENT

APPENDIX B – ADDITIONAL STRATEGIC DEVELOPMENT LOCATIONS ASSESSMENT TABLES: SEPARATE DOCUMENT

APPENDIX C – ADDITIONAL LOCATIONS INFORMATION (PROVIDED BY DBC): SEPARATE DOCUMENT

1 Introduction

1.1 Background

Dacorum Borough Council (DBC) published its Emerging Core Strategy for consultation in June 2009 and this was accompanied by a Sustainability Appraisal (incorporating Strategic Environmental Assessment) Working Note. The Working Note summarised the interim findings of the Sustainability Appraisal (SA) on the Emerging Core Strategy.

An addendum to the working note was published in February 2010 to report the findings of the appraisal of additional strategic development locations in Berkhamstead and Tring. This working note built on the work undertaken in June 2009 which previously assessed locations in Kings Langley, Bovington and Markyate, as well as Berkhamstead and Tring.

This second addendum summarises the findings of the Sustainability Appraisal on a number of Additional Strategic Development Locations and Sites located in the Greenbelt around Hemel Hempstead.

This Addendum should be read alongside the SA Working Note and its accompanying appendices (published June 2009), which can be accessed on the Dacorum Borough Council website (<http://www.dacorum.gov.uk/>). In addition, information on the additional locations and sites to be appraised (supplied by DBC) is provided in Appendix C of this document.

As with the original SA Working Note, the Addendum does not form a formal part of the SA/SEA reporting process. It has been produced to contribute to the ongoing plan-making process, by providing an independent assessment of the Additional Strategic Development Locations, with a view to guiding the next stage of its development. Sustainability Appraisal is a decision aiding tool rather than a decision making one and the contents of this report should therefore be considered in this light.

1.2 Assessment Methodology

The appraisal approach taken within this Addendum utilises the SA/SEA Framework Objectives that were developed for the Sustainability Appraisal Scoping Report for Dacorum Borough Council. The SA/SEA Framework is provided in Appendix A.

The Additional Strategic Development Locations and Sites have been assessed against the SA/SEA framework objectives in terms of their overall performance ranked from 'very sustainable' to 'very unsustainable', using the scoring criteria outlined below.

Significance Assessment	Description
✓✓	Very sustainable - Option is likely to contribute significantly to the SA/SEA objective
✓	Sustainable - Option is likely to contribute in some way to the SA/SEA objective
?	Uncertain - It is uncertain how or if the Option impacts on the SA/SEA objective
–	Neutral - Option is unlikely to impact on the SA/SEA objective
x	Unsustainable - Option is likely to have minor adverse impacts on the SA/SEA objective
xx	Very unsustainable - Option is likely to have significant adverse impacts on the SA/SEA objective

2 Assessment Results

The following section provides a summary of the assessment results. Full assessment tables providing more detailed information can be found in Appendix B.

2.1 Shendish (north)

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
x	x	-	x	✓	-	x	x	x	x	xx	x	✓	✓	✓	-	-	✓	✓	x

This option is forecast as having positive effects on 'greenhouse gas emissions' as the site has good access to local facilities in Apsley. The site is also located close to a train station and there is potential for creation of a public transport link through Manor Estate, both of which could encourage a shift from private car use to public transport. However the potential for additional congestion on London Road (part of which is soon to be designated by the Council as an Air Quality Management Area) has led to an adverse assessment in relation to 'air quality'.

Adverse effects have been forecast for 'biodiversity', 'water quality/quantity', 'soils' and 'use of brownfield sites'. The site is greenfield and would therefore result in loss or damage of habitats as well as soil sealing. The option is also located within a sand and gravel belt,

which could have implications for safeguarding mineral reserves, resulting in adverse effects for 'resource efficiency'. Development of this option would have a significant visual impact on the landscape of Gade Valley, and would have a potential impact on the setting of Shendish Manor. Development in this area of the Greenbelt would decrease the gap between Hemel Hempstead and Rucklers Lane. The option is located adjacent to an area of archaeological significance and is located near Shendish Manor, which is a Grade II listed building and therefore adverse effects have been identified for 'historic and cultural assets'.

The option is located near local facilities, which could encourage walking and cycling, although the topography of the site may discourage these modes. The site's location near to the A41 could result in noise levels that could also adversely affect health and wellbeing. Developing this option would also lead to the loss of recreational facilities, as well as reducing the recreational value of footpaths through the area, which would reduce opportunities for healthy lifestyles. These factors would result in an overall adverse effect on the 'health' objective.

The option is located near a local centre which would result in a positive effect on 'equality and social exclusion'. However, the two local primary schools are already at capacity and the location means that the area is relatively isolated from the rest of Hemel Hempstead.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide approximately 300 units of housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.2 Shendish (south)

SA Objectives (Abridged)	
1. Biodiversity	x
2. Water quality/quantity	x
3. Flood risk	-
4. Soils	x
5. GHG Emissions	✓
6. Climate Change Proof	-
7. Air Quality	x
8. Use of brownfield sites	x
9. Resource Efficiency	x
10. Historic & Cultural Assets	x
11. Landscape & Townscape	x
12. Health	✓ x
13. Sustainable Locations	✓
14. Equality/ Social Inclusion	✓ x
15. Good Quality Housing	✓
16. Community Identity and Participation	-
17. Crime and Fear of Crime	-
18. Sustainable Prosperity and Growth	✓
19. Fairer Access to Services	✓
20. Revitalise Town Centres	x

This option is forecast as having positive effects on ‘greenhouse gas emissions’ as the site has good access to local facilities in Apsley. The site is also located close to a train station which could encourage a shift from private car use to public transport. However the potential for additional congestion on London Road (part of which is soon to be designated by the Council as an Air Quality Management Area) has led to an adverse assessment in relation to ‘air quality’.

Adverse effects have been forecast for ‘biodiversity’, ‘water quality/quantity’, ‘soils’ and ‘use of brownfield sites’ The site is greenfield and would therefore result in loss or damage of habitats as well as soil sealing. The option is also located within a sand and gravel belt, which could have implications for safeguarding mineral reserves resulting in adverse effects for ‘resource efficiency’. The option would have a visual impact on the landscape of Gade Valley, and would have a potential impact on the setting of Shendish Manor. Development in this area of the Greenbelt would decrease the gap between Hemel Hempstead and Rucklers Lane. The option is located adjacent to an area of archaeological significance and is located near Shendish Manor, which is a Grade II listed building and therefore adverse effects have been identified for ‘historic and cultural assets’.

The option is located at near local facilities, which could encourage walking and cycling, although the topography of the site may discourage these modes. The site’s location near to the A41 could result in noise levels that could also adversely affect health and wellbeing. These factors would result in an overall adverse effect on the ‘health’ objective.

The option is located near a local centre which would result in a positive effect on ‘equality and social exclusion’. However, the two local primary schools are already at capacity and

the location of the option means that the area is relatively isolated from the rest of Hemel Hempstead.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide approximately 300 units of housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.3 Felden

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
xx	-	-	x	x	-	x	x	-	-	x	x	x	x	✓	-	-	✓	✓	x

The option would lead to development on greenfield land within GreenBelt. The option also includes a wildlife site "Grasslands south of Roughdown Common" which would mean that development on this location would lead to significant adverse effects on 'biodiversity', and adverse effects on 'soils', 'use of brownfield land' and 'landscape'. In addition, the site is located adjacent to Roughdown Common SSSI and common land, and development would result in the loss of land actively managed by the Boxmoor Trust for grazing and in the interests of nature conservation.

The option is located at a distance from the town centre, which could increase the use of car therefore having adverse effects on 'greenhouse gas emissions' and 'air quality'. However the site is located near the railway station and bus routes, which could increase the use of public transport, but the effect is very dependent on the uptake of these modes. The option is located at a distance from facilities which could discourage walking and cycling. The site's

location near to the A41 could result in noise levels that could also adversely affect health and wellbeing.

Adverse effects have been identified on the 'sustainable locations' and 'equality and social exclusion' SA objectives for the option as it is located at a distance from the town centre.

Positive effects have been forecast for the option on the 'good quality housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The new housing (approximately 300 units of housing) should help to support the local services in the town, maintaining their viability and boosting the local economy, thereby helping to support sustainable urban living. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.4 West Hemel Hempstead (north)

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
x	-	-	x	x	-	x	x	-	-	x	x	x	x	✓	-	-	✓	✓	x

This option is forecast as having adverse effects on 'greenhouse gas emissions' and 'air quality', as the site is located at a distance from shops and facilities, which could increase the need to travel. Walking and cycling may be discouraged due to the topography of the area. Adverse effects have also been forecast for 'biodiversity', 'soils', and 'use of brownfield sites'. The site is greenfield within the Greenbelt, and would therefore result in loss or damage of habitats as well as soil sealing. The option would have a visual impact on the landscape of Bulborne Valley.

The option is located at a distance from shops and facilities which could discourage walking and cycling, and the topography of the site may discourage these modes. The local health facilities are at capacity, thereby having an adverse effect on 'health'.

In terms of 'equality and social exclusion', the option is located at a distance from local facilities, and local health facilities are at capacity. However, there is potential capacity in local schools.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide approximately 450 units of housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.5 West Hemel Hempstead (south)

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
x	-	-	x	x	-	x	x	-	-	x	x	x	x	✓	-	-	✓	✓	x

This option is forecast as having adverse effects on 'greenhouse gas emissions' and 'air quality', as the site is located at a distance from shops and facilities, which could increase the need to travel. Walking and cycling may be discouraged due to the topography of the area. Adverse effects have also been forecast for 'biodiversity', 'soils', and 'use of brownfield sites'. The site is greenfield within the Greenbelt, and would therefore result in loss or damage of habitats as well as soil sealing. The option would have a significant visual impact on the landscape of Bulborne Valley and the nearby Chilterns AONB. The option could also impact on the existing green link between Shrubhill Common and the countryside.

The option is located at a distance from shops and facilities which could discourage walking and cycling, and the topography of the site may discourage these modes. The local health facilities are at capacity, thereby having an adverse effect on 'health'. The option is located

near A41 and the railway, which could result in noise levels that could affect health and wellbeing.

In terms of 'equality and social exclusion', the option is located at a distance from local facilities, and local health facilities are at capacity, resulting in adverse impacts on this objective.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide approximately 450 units of housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.6 Marchmont Farm

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
x	-	-	x	✓	-	✓	x	-	-	x	✓	✓	✓	✓	-	-	✓	✓	x

This option is forecast as having positive effects on 'greenhouse gas emissions' and 'air quality', as the site has good access to local facilities which could decrease the need to travel, reducing the level of growth in emissions.

Adverse effects have been forecast for 'biodiversity', 'soils', and 'use of brownfield sites'. The site is greenfield within the Greenbelt, and would therefore result in loss or damage of habitats as well as soil sealing. The option would have a visual impact on the landscape of Gade Valley and Piccotts End, resulting in adverse impacts for 'landscape'.

The option is located near local facilities, which could encourage walking and cycling, resulting in positive effects on 'health'. This option is considered to be more sustainable

than other greenfield sites due to the proximity to the existing link road, schools and local shops.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', 'fairer access to services' objectives. The option will provide approximately 300 units of housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.7 Old Town¹

SA Objectives (Abridged)																			
1. Biodiversity	2. Water quality/quantity	3. Flood risk	4. Soils	5. GHG Emissions	6. Climate Change Proof	7. Air Quality	8. Use of brownfield sites	9. Resource Efficiency	10. Historic & Cultural Assets	11. Landscape & Townscape	12. Health	13. Sustainable Locations	14. Equality/ Social Inclusion	15. Good Quality Housing	16. Community Identity and Participation	17. Crime and Fear of Crime	18. Sustainable Prosperity and Growth	19. Fairer Access to Services	20. Revitalise Town Centres
x	-	-	x	✓	-	✓	x	-	?	x	✓ x	✓	✓	✓	-	-	✓	✓	x

This option is forecast as having positive effects on 'greenhouse gas emissions' and 'air quality', as the site has good access to local facilities, however walking and cycling may be discouraged due to the topography of the area.

Adverse effects have been forecast for 'biodiversity', 'soils', and 'use of brownfield sites'. The site is greenfield and is located adjacent to Howe Grove Wood LNR and Wildlife site, and would therefore result in loss or damage of habitats as well as soil sealing. If the smaller site is developed, however it would be some distance from the designation and separated from it by Fletcher Way. The option is located near two Conservation Areas, and development may have an impact on their setting, resulting in uncertainty of the impact on

¹ There are two potential options for development at this site: first for the whole site and second for the southern end of the site below Fletcher Way.

'historic and cultural assets'. Again, if the smaller site is developed however this would be further away from the Piccotts End Conservation Area.

Development in the Greenbelt at this location would result in the coalescence of Hemel Hempstead with Piccotts End, particularly if the whole area is developed for housing, rather than just the area to the south of Fletcher Way.

The option is located near local facilities, which could encourage walking and cycling, thereby having a positive effect on 'health', although the topography of the site may discourage these modes. Developing this option would also mean that there would be a loss of public open space, reducing the potential for recreational activities, having an adverse impact on 'health'.

Positive effects have been forecast against the majority of the social and economic objectives, including the 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide housing, including a proportion of affordable housing, however the level of effects against these objectives is dependent on whether just the southern part of the site will be developed, which would provide approximately 80 units of housing, or whether the entire site is developed, which would provide approximately 350 units of housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable, especially if the area north of Fletcher Way is developed. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

2.8 Nash Mills

SA Objectives (Abridged)	
1. Biodiversity	x
2. Water quality/quantity	-
3. Flood risk	x
4. Soils	x
5. GHG Emissions	✓
6. Climate Change Proof	-
7. Air Quality	x
8. Use of brownfield sites	x
9. Resource Efficiency	x
10. Historic & Cultural Assets	-
11. Landscape & Townscape	x
12. Health	✓ x ?
13. Sustainable Locations	✓
14. Equality/ Social Inclusion	?
15. Good Quality Housing	✓
16. Community Identity and Participation	-
17. Crime and Fear of Crime	-
18. Sustainable Prosperity and Growth	✓
19. Fairer Access to Services	✓
20. Revitalise Town Centres	x

The option would lead to development on greenfield land within the Green Belt and includes the "Grand Union Canal/River Gade" and "Two Waters to Nash Mills" wildlife sites. These factors would mean that development on this location would lead to adverse effects on 'biodiversity', 'flood risk', 'soils', 'use of brownfield land' and 'landscape'. The option is also located within a sand and gravel belt, which could have implications for safeguarding mineral reserves resulting in adverse effects for 'resource efficiency'. The Council is shortly to designate an Air Quality Management Area (AQMA) for part of London Road near to the Apsley local centre and additional traffic created by development at Nash Mills would add to existing problems. Therefore adverse effects have been identified for 'air quality'.

The option is located near local facilities, which could encourage walking and cycling, and is also located within a reasonable distance from Apsley station and bus routes thereby having an positive effect on 'greenhouse gas emissions' and 'health'. However, the option is located near the A4251 and the railway which could result in noise levels that could affect health and wellbeing. The option is located directly adjacent to the fuel pipeline "UKOP Leg 1 Thames to Bovington" which may have implications for health and wellbeing.

The option is located near two primary schools which are already at capacity and there is a need for a new school, so this leads to uncertainty over the effect on 'equality and social exclusion'.

Positive effects have been forecast against the majority of the social and economic objectives, including 'housing', 'sustainable prosperity and growth', and 'fairer access to services' objectives. The option will provide housing, including a proportion of affordable housing. The provision of additional housing means there will be more residents in the community making facilities and shops more viable. This would help support the local economy. However, this option would result in adverse effects on 'revitalise town centres', as by developing new homes in the Greenbelt around Hemel Hempstead this is not encouraging development in the centre of urban areas.

Appendix A: SA Framework

Objective	Criteria	Indicators (Bold indicates existing)
Biodiversity		
1. To protect, maintain and enhance biodiversity and geodiversity at all levels, including the maintenance and enhancement of Biodiversity Action Plan habitats and species in line with local targets	To protect, maintain and enhance designated wildlife and geological sites (international, national and local) and protected species to achieve favourable condition	Herts QoL WH6 Condition of SSSIs (contextual indicator) and HBRC number, area and condition of SSSIs
	To restore characteristic habitats and species, to achieve BAP targets	HBRC Change in areas designated for their intrinsic value
	To support farming and countryside practices that enhance wider biodiversity and landscape quality by economically and socially valuable activities (e.g. grazing, coppicing, nature reserves)	HBRC Change in Priority Habitats Herts QoL WH3 Wildlife Sites and HBRC number and area of Wildlife Sites HBRC no. of Wildlife Sites lost or degraded by development or gained/secured by agreements Herts QoL WH1 Water voles Herts QoL WH2 Birds (contextual indicator) Herts QoL WH4 Pipistrelle bats Herts QoL WH5 Butterflies HBRC distribution/change of key species in Herts HBRC distribution/change of protected species in Herts COI 8 Changes in areas and populations of biodiversity importance
	To manage woodlands and other habitats of value for biodiversity in a sustainable manner and protect them against conversion to other uses	% woodland cover in District
	To recognise the social/environmental value and increase access to woodlands, wildlife & geological sites and green spaces particularly near/in urban areas	Percentage of wildlife sites accessible by sustainable modes of travel

Objective	Criteria	Indicators (Bold indicates existing)
	To encourage people to come into contact with, understand, and enjoy nature	Number of visitors to wildlife sites
Water		
2. To protect, maintain and enhance water resources (including water quality and quantity) while taking into account the impacts of climate change	To raise awareness and encourage higher water efficiency and conservation by for instance promoting water reuse in new and existing developments	Level of awareness of water issues and the need for water saving (contextual indicator)
	To ensure water consumption does not exceed levels which can be supported by natural processes and storage systems	Average household water consumption per capita
	To improve chemical and biological quality and flow of rivers and encourage practices which reduce nitrate levels in groundwater	Commercial water consumption
	To improve flow of rivers	Proportion of housing (existing and new development) with installed water efficient devices/water metres
	To reduce the number and severity of pollution incidents	Herts QoL WR3 River quality objectives
	To maintain or restore the integrity of water dependent wildlife sites in the area	EA Biological and chemical river quality (contextual indicator) Number and severity of pollution incidents to surface water and groundwater
3. Ensure that new developments avoid areas which are at risk from flooding and natural flood storage areas	To avoid developments in areas being at risk from fluvial, sewer or groundwater flooding (for instance natural flood plains) while taking into account the impacts of climate change	Number of properties at risk from flooding
	To ensure that developments, which are at risk from flooding or are likely to be at risk in future due to climate change, are sufficiently adapted	Proportion of runoff from new developments which is directed into Sustainable Urban Drainage Systems (SUDs) ²
	To promote properly maintained sustainable urban drainage systems to reduce flood risk and run off in areas outside Source Protection Zones 1 (SPZ)	
Soil		
4. Minimise development of land with high quality soils and	To safeguard high quality soils, such as agricultural land grades 1, 2 and 3a) from development	Amount of high quality agricultural land degraded/lost to development

² Sustainable Urban Drainage Systems (SUDS) are management practices and physical structures designed to drain surface water in a more sustainable way than conventional systems.

Objective	Criteria	Indicators (Bold indicates existing)
minimise the degradation/loss of soils due to new developments	To limit contamination/degradation/loss of soils due to development	<p>Area/percentage of contaminated land remediated</p> <p>Number of development sites having a policy to safeguard soils</p> <p>Area of proposed new developments on greenfield sites</p>
Climatic Factors		
5. Reduce the impacts of climate change, with a particular focus on reducing the consumption of fossil fuels and levels of CO ₂	To minimise greenhouse gas emissions (particularly CO ₂) for instance through more energy efficient design and reducing the need to travel	<p>NAIE Emissions of greenhouse gases (particularly CO₂) per capita grouped per type of source</p> <p>BV 63 Energy efficiency - average SAP rating of authority dwellings</p> <p>BV 80a (i) Actual/'Typical' energy consumption LA buildings - electricity</p> <p>BV 80a (ii) Actual/'Typical' energy consumption LA buildings - fossil fuels</p> <p>Herts QoL EN1 Energy efficiency in homes - overall reduction in CO₂ emissions %</p> <p>Herts QoL EN2 Energy efficiency in public buildings</p>
	To promote increased carbon sequestration e.g. through increases in woodland cover	
	To adopt lifestyle changes which help to mitigate and adapt to climate change, such as promoting water and energy efficiency (through for instance higher levels of home insulation)	
6. Ensure that developments are capable of withstanding the effects of climate change (adaptation to climate change)	To promote design measures which enable developments to withstand and accommodate the likely impacts and results of climate change (for instance through robust and weather resistant building structures)	<p>Percentage of new developments considered to be 'climate change proof'</p> <p>(For indicators regarding renewable energy see section on material assets)</p>
Air Quality		
7. Achieve good air quality, especially in urban areas	To reduce the need to travel by car through planning settlement patterns and economic activity in a way that reduces dependence on the car and maintains access to work and essential services for non-car-owners	<p>NAIE Levels of key air pollutants (e.g. Benzene, 1,3-Butadiene, CO₂, Lead, NO₂, PM10, SO₂) within the local authority area, and within the East of England</p> <p>Herts QoL QoL27 Air Pollution</p>
	To integrate land use and transport planning by for instance:	

Objective	Criteria	Indicators (Bold indicates existing)
	<ul style="list-style-type: none"> ▪ Promoting Green Transport Plans, including car pools, car sharing as part of new developments ▪ Ensuring services and facilities are accessible by sustainable modes of transport <p>To ensure that development proposals do not make existing air quality problems worse</p> <p>To address existing or potential air quality problems</p>	<p>Herts QoL TR1 Volume of motor traffic</p> <p>Herts QoL TR2 Modal split</p> <p>Number of days when air pollution reported as moderate or higher within the local authority area</p> <p>Number of designated AQMAs</p>
Material Assets		
8. Maximise the use of previously developed land and buildings, and the efficient use of land	<p>To concentrate new developments on previously developed land (PDL)</p> <p>To avoid use of Greenfield sites for development</p> <p>To maximise the efficient use of land and existing buildings by measures such as higher densities and mixed use developments</p> <p>To encourage the remediation of contaminated and derelict land and buildings</p>	<p>COI 1(a) & (c) Amount of land developed for employment by type and percentage which is on previously developed land</p> <p>COI 1(b) Amount of land developed for employment by type, which is in development and/or regeneration areas defined in the LDF</p> <p>COI 2(b) Percentage of new and converted dwellings on previously developed land</p> <p>COI 2(c) Percentage of new dwellings completed at: less than 30, between 30 and 50 and above 50 dwellings per hectare</p> <p>Herts QoL LU3 Residential development on previously developed land</p> <p>BV106 % of new homes built on previously developed land</p>
9. To use natural resources, both finite and renewable, as efficiently as possible, and re-use finite resources or recycled alternatives wherever possible	<p>To encourage maximum efficiency and appropriate use of materials, particularly from local and regional sources</p> <p>To require new developments to incorporate renewable, secondary, or sustainably sourced local materials in buildings and infrastructure</p> <p>To safeguard reserves of exploitable minerals from</p>	<p>Amount and percentage of secondary and recycled materials (including minerals and aggregates) used in construction</p> <p>BV82a Household waste - percentage recycled</p> <p>BV82b Household waste - percentage</p>

Objective	Criteria	Indicators (Bold indicates existing)
	<p>sterilisation by other developments</p> <p>To promote renewable energy sources as part of new or refurbished developments</p> <p>To increase recycling and composting rates and encourage easily accessible recycling systems as part of new developments</p> <p>To promote awareness regarding waste/recycling and renewable energy issues through education programmes in schools and the community</p>	<p>composted</p> <p>BV82c Household waste - percentage of heat, power and other energy recovered</p> <p>BV82d Household waste - percentage landfilled</p> <p>BV84 Kg of household waste collected per head</p> <p>Herts QoL WS1 Household waste per capita</p> <p>Herts QoL WS3 Percentage of waste recycled</p> <p>Proportion of developments which incorporates design measures to facilitate sustainable household waste management</p>
Cultural Heritage		
<p>10. To identify, maintain and enhance the historic environment and cultural assets</p>	<p>To safeguard and enhance the historic environment and restore historic character where appropriate, based on sound historical evidence</p> <p>To promote local distinctiveness by maintaining and restoring historic buildings and areas, encouraging the re-use of valued buildings and thoughtful high quality design in housing and mixed use developments – to a density which respects the local context and townscape character, and includes enhancement of the public realm</p> <p>To promote public education, enjoyment and access of the built heritage and archaeology</p>	<p>Number of Listed Buildings at Risk</p> <p>Number and condition of Scheduled Ancient Monuments (SAMs)</p> <p>Number and condition of Registered Parks and Gardens</p> <p>Number of Conservation Areas</p> <p>% of Conservation Areas with character appraisals</p> <p>Percentage of historic buildings and structures open to the public</p> <p>Numbers of historic assets taken from the 'at risk' category</p> <p>Number of historic assets restored/reused</p> <p>Number of locally important buildings to be demolished</p>

Objective	Criteria	Indicators (Bold indicates existing)
		<p>Changes inconsistent with historic landscape</p> <p>Quality in the built environment as measured by public perception surveys</p> <p>A measure of increased public access or interpretation of sites</p>
Landscape		
11. To conserve and enhance landscape and townscape character and encourage local distinctiveness	To protect and enhance landscape and townscape character	<p>CQC Changes inconsistent with (local) landscape character</p> <p>Area of designated landscapes affected by/lost to development</p> <p>CPRE Light pollution and tranquillity mapping</p>
	To evaluate the sensitivity of the landscape to new/inappropriate developments and avoid inappropriate developments in these areas	
	To protect 'dark skies' from light pollution, and promote low energy and less invasive lighting sources while considering the balance between safety and environmental impacts	
	To minimise the visual impact of new developments	
Population and Human Health		
12. To encourage healthier lifestyles and reduce adverse health impacts of new developments	To promote the health advantages of walking and cycling and community based activities	<p>Length and condition of cycle / footpath network</p> <p>Number and condition of sports facilities</p> <p>COI 4(c) Percentage of eligible open spaces managed to green flag award standards</p> <p>Percentage of population with access to public open space</p> <p>Herts QoL NO1 Noise complaints received per 1000 population</p> <p>Herts QoL NO2 Source of noise complaints</p>
	To identify, protect and enhance open spaces, such as rivers and canals, parks and gardens, allotments and playing fields, and the links between them, for the benefit of people and wildlife	
	To include specific design and amenity policies to minimise noise and odour pollution, particularly in residential areas	
	To narrow the income gap between the poorest and wealthiest parts of the area and to reduce health differential	
13. To deliver more sustainable patterns of location of	To reduce the need to travel through closer integration of housing, jobs and services	Percentage of health facilities accessible by sustainable modes of travel

Objective	Criteria	Indicators (Bold indicates existing)
development	To promote better and more sustainable access to health facilities	Herts QoL TR2 Modal spilt Accessibility modelling
Social Factors		
14. Promote equity & address social exclusion by closing the gap between the poorest communities and the rest	To include measures which will improve everyone's access to high quality health, education, recreation, community facilities and public transport	Index of Multiple Deprivation BV156 % of local authority buildings suitable for and accessible by disabled people BV170a Number of visits to/usage's of museums per 1,000 population BV 117 Visits to libraries Number per capita Herts QoL SE3 Transport: access to public services COI 3(b) Percentage of new residential development within 30 minutes of a GP, hospital, primary & secondary school, employment and major health centre Herts QoL ED1 GCSE performance Herts QoL ED2 Adult education level 2* Herts QoL QoL9 Young people with Level 2 qualifications BV38 % of pupils achieving 5 or more GCSEs at grades A* - C or equivalent % pensioners in households with below average income % children in households with below have half average income
	To ensure facilities and services are accessible by people with disabilities and minority groups	
	To encourage people to access the learning and skills they need for high quality of life	
	To ensure that the LDF does not discriminate on the basis of disability, ethnic minority, or gender	
15. Ensure that everyone has access to good quality housing that meets their needs	Promote a range housing types and tenure, including high quality affordable and key worker housing	COI 2(d) Affordable housing completions BV184a LA homes which were non-

Objective	Criteria	Indicators (Bold indicates existing)
		<p>decent at start of year</p> <p>BV184b Change in proportion on non-decent homes (negative means deterioration in stock)</p> <p>Herts QoL HS1 Affordable housing (house price/earnings affordability ratio)</p> <p>Herts QoL HS2 Statutorily unfit homes</p> <p>Herts QoL HS3 Homelessness</p>
16. Enhance community identity and participation	To recognise the value of the multi-cultural/faith diversity of the peoples in the region	Number of community facilities per 10,000 population
	To improve the quality of life in urban areas by making them more attractive places in which to live and work, and to visit	Town centre health checks CABE design review of schemes with significant impacts (if conducted)
	To encourage high quality design in new developments, including mixed uses, to create local identity and encourage a sense of community pride	
17. Reduce both crime and fear of crime	To reduce all levels of crime with particular focus on violent, drug related, environmental and racially motivated crime	BV126a Burglaries No. per 1,000 households
	To plan new developments to help reducing crime and fear of crime through thoughtful design of the physical environment, and by promoting well-used streets and public spaces	BV127a Robberies per 1000 population and percentage detected BV127b violent offences committed in a public place per 1,000 population
	To support government-sponsored crime/safety initiatives, maximising the use of all tools available to police, local authorities and other agencies to tackle anti-social behaviour	BV127c violent offences committed in connection with licensed premises per 1,000 population BV127d violent offences committed under the influence per 1,000 population BV128a Vehicle crimes No. per 1,000 population BV174 Number of recorded racial

Objective	Criteria	Indicators (Bold indicates existing)
		incidents per 100,000 population Fear of crime statistics
Economic Factors		
18. Achieve sustainable levels of prosperity and economic growth	To support an economy in the Authority which draws on the knowledge base, creativity and enterprise of its people	Herts QoL EC1 Percentage rise in GVA Herts QoL UN1 Long term unemployment Herts QoL QoL1 Proportion of people of working age in employment COI 1(f) Amount of employment land lost to residential development Business start up failures
	To promote and support economic diversity, small and medium sized enterprises and community-based enterprises	
	To support the economy with high quality infrastructure and a high quality environment	
19. Achieve a more equitable sharing of the benefits of prosperity across all sectors of society and fairer access to services, focusing on deprived areas in the region	To encourage local provision of and access to jobs and services	Herts QoL QoL5 The percentage increase/decrease in the number of local jobs In/out commuting balance Rate of growth of businesses (urban and rural)
	To improve the competitiveness of the rural economy	
20. Revitalise town centres to promote a return to sustainable urban living	To promote the role of local centres as centres for sustainable development providing services, housing and employment, drawing on the principles of urban renaissance	COI 4(b) Percentage of completed retail, office and leisure development in town centres
	To encourage well-designed mixed-use developments in the heart of urban areas, create viable and attractive town centres that have vitality and life, and discourage out-of-town developments	