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Sustainability Appraisal of the Stratford-on-Avon Core Strategy

Part 1 Options SA Report

October 2011





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Part 1 Options SA Report

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Appendix A: Stratford-on-Avon Core Strategy SA Framework

Abbreviations

AQMA	Air Quality Management Area
CLG	(Department of) Communities and Local Government
CO ₂	Carbon dioxide
DPD	Development Plan Document
PPS	Planning Policy Statement
SA	Sustainability Appraisal
SDC	Stratford-on-Avon District Council
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SPD	Supplementary Planning Document
SuDS	Sustainable Drainage Systems

1 Introduction

1.1 Purpose of this Report

- 1.1.1 This Part 1 Options SA Report has been prepared for Stratford-on-Avon District Council (SDC) as part of the Sustainability Appraisal (SA) process for the Stratford-on-Avon Core Strategy. This SA report has been prepared to appraise the first round of Development Plan Document (DPD) options for the district. This stage of options preparation will be followed up with a second phase of identifying options which will also be subject to SA. For this reason, this report is called Part 1. This report also presents a “history of the options process” prepared during the “RSS years”.
- 1.1.2 SA is the process of informing and influencing the evolution of the Core Strategy to maximise the sustainability value of the plan. In this context this report should be considered through the ongoing development of the Core Strategy.

1.2 The SA Process

- 1.2.1 The appraisal of reasonable alternatives for the Core Strategy follows scoping. This Part 1 Options SA Report follows the release of an SA Scoping Report to the Consultation Authorities¹ in May 2011. The Scoping Report establishes the assessment methodology for the SA process. Subsequent to the receipt and consideration of responses received on the Scoping Report, the information included in the Scoping Report was updated to take into account comments received and to reflect new information that has recently become available. A summary of scoping responses was provided to SDC at the SA project meeting of 1st July 2011.
- 1.2.2 The preparation of options is an integral part of the DPD creation process. Options can be thought of as alternative means of shaping and influencing the final format of the DPD. The SA process provides a basis for appraising the effects of each option. It is a requirement of the SEA Directive (2001/42/EC) that reasonable alternatives are assessed during the preparation of a plan or programme.
- 1.2.3 The SEA Directive requires that the SA process considers ‘reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme’ and give ‘an outline of the reasons for selecting the alternatives dealt with’ (Article 5.1 and Annex I (h)).
- 1.2.4 The preparation of options to inform the Stratford-on-Avon Core Strategy has taken place over a period of approximately two years. It is still not complete and further stages of options development are planned.

¹ The Consultation Authorities comprise English Heritage, Environment Agency and Natural England.

1.3 Appraisal of Reasonable Alternatives

1.3.1 The purpose of the appraisal of reasonable alternatives is to inform and influence the development of the preferred spatial and policy framework for the Core Strategy, with the aim of maximising the sustainability value of the plan. In this context the findings and recommendations arising from the appraisal of reasonable alternatives should be fully considered by the ongoing development of the Core Strategy.

1.4 The Development of Initial Options and Housing Development Options for the Core Strategy

1.4.1 Significant work has been undertaken on the Core Strategy since 2007. The Core Strategy is currently being updated in light of the Coalition Government's proposed approach to plan-making, and it is now necessary for SDC to reconsider certain matters for the Core Strategy, particularly in relation to the scale and purpose of residential development in the district. As a result of this process the release of a third Draft Core Strategy for consultation will take place early in 2012.

1.4.2 A key part of the development of earlier versions of the Core Strategy was the consideration of a number of options for guiding the distribution of new growth in Stratford-on-Avon. This considered a range of alternative approaches as to where residential, employment and services should be provided in the district.

1.4.3 On this basis six broad 'Locational Options for Future Development', or Initial Options, were initially proposed for the Core Strategy, and subsequently put forward for stakeholders' views through an Issues and Options consultation which took place in May and June 2007.

1.4.4 The six Initial Options were as follows:

1. Concentrate development in and on the edge of Stratford-upon-Avon;
2. Concentrate development in and on the edge of the larger rural towns and villages;
3. Spread development around most towns and villages throughout the district;
4. Focus development in the form of a new settlement or as a major expansion of an existing settlement;
5. Locate development along main public transport routes (existing or potential); and
6. Focus development on large brownfield (previously developed) sites in the countryside.

1.4.5 The Initial Options informed the development of the first draft of the Core Strategy, which was published in October 2008 (SDC, 2008a).

1.4.6 Subsequent to the release of the first draft of the Core Strategy, in September 2009 the Panel Report on the West Midlands Regional Spatial Strategy Phase Two Revision Examination in Public was published by the Government Office for the West Midlands. This recommended that the housing requirement for Stratford-on-Avon should be increased from 5,600 dwellings to 7,500 dwellings for the period 2006-2026 (WMRA, 2009).

- 1.4.7 To reflect the changes to housing provision put forward by the RSS Phase Two Revision, a further set of Housing Development Options were considered for the Draft Core Strategy in early 2010. Based on a preferred dispersal approach towards future development in the district, the assessment was undertaken to determine the most appropriate distribution of the housing levels proposed by the RSS Phase Two Revision Panel Report. In this context the options put forward different proposed distributions between three categories of settlement in the district, and rural brownfield sites.
- 1.4.8 The Housing Development Options, which were presented in the February 2010 Consultation Core Strategy, were as follows:
- a. Focus on Stratford-upon-Avon;
 - b. Focus on Main Rural Centres;
 - c. Moderate Dispersal; and
 - d. Extensive Dispersal.
- 1.4.9 The purpose of this Part 1 Options SA Report is to appraise these two sets of broad development options: (i) the Initial Options and (ii) the Housing Development Options. This has been carried out through appraising the likely sustainability implications of taking forward each option to the preferred approach for the Core Strategy.

1.5 Development of Further Options for the Core Strategy

- 1.5.1 The assessment presented in this Part 1 Options SA Report should be considered as the first round of the appraisal of reasonable alternatives. The SA team understand that a number of further options are currently being developed to deliver growth in the district. These are likely to be based on three scenarios, which are loosely based on the following: (i) current population trends; (ii) an economic growth scenario; and (iii) a reduction in growth. They will differ from previous options considered in that rather than focussing on the distribution aspects of new growth in Stratford-on-Avon, they will instead consider different levels of residential, employment and service provision in the district.
- 1.5.2 The residential, employment and service provision figures linked to the three growth scenarios are currently being established for SDC. For this reason, this Part 1 Options SA Report only considers the six Initial Options and four Housing Development Options outlined in **section 1.4.4** and **1.4.8**. The second round of appraisal of reasonable alternatives will take place once the figures linked to the three growth scenarios have been established. This process is due to be completed shortly.
- 1.5.3 In June 2011, GLHearn prepared a Housing Options Study for SDC. The study assesses housing need and demand in Stratford-on-Avon, taking account of population and economic dynamics, and considers land availability and strategic infrastructure constraints to identify options for housing provision in the district over the plan period. In this context three Housing Requirement Options were put forward by the Study, which present different levels of housing provision in the district to 2028.

- 1.5.4 Whilst the Housing Options Study presents a brief 'sustainability assessment' of the Housing Requirement Options, the options will be assessed against the SA Objectives developed through the SA process. This will help ensure that consistent approach is taken to the appraisal of reasonable alternatives for the Core Strategy through the SA process.
- 1.5.5 The second round of the appraisal of reasonable alternatives will be presented in the Part 2 Options SA Report.

1.6 How to Use this Document

- 1.6.1 This Part 1 Options SA Report should be considered alongside the Part 2 Options SA Report to provide sustainability context. It should be noted that this report is not the equivalent of an Environmental Report in line with the SEA Directive; this will be published later in the process. The information presented herein is a key part of the assessment of alternatives and will be documented in the Environmental Report.
- 1.6.2 Whilst an Options SA Report is not a requisite part of the CLG SA Guidance (CLG, 2009a), this document follows the intentions of PPS12 (CLG, 2008). In this context, the Part 1 Options SA Report presents sustainability issues for consideration alongside the proposed options for the Core Strategy.
- 1.6.3 The Part 1 Options SA Report is structured as follows:

Chapter 2 and **Appendix A** sets out the methodology for the assessment of the six Initial Options and four Housing Development Options proposed for the district.

Chapter 3 presents the findings of the appraisal of the Initial Options and discusses in detail the assessment of the six options proposed. This is presented through a set of assessment matrices, commentary and an accompanying summary which compares the sustainability performance of each of the options in relation to the SA Objectives developed during scoping.

Chapter 4 presents the findings of the appraisal of the Housing Development Options and discusses the assessment of the four options proposed. This is presented through a set of assessment matrices, commentary and an accompanying summary which compares the sustainability performance of each of the options in relation to the SA Objectives developed during scoping.

The final chapter of the report (**Chapter 5**) presents a number of conclusions linked to the appraisal carried out on the options and sets out the next steps for the SA process.

2 Assessment Methodology

2.1 Introduction

2.1.1 This chapter sets out the approach to the appraisal of the Initial Options and the Housing Development Options discussed in the previous chapter. It also discusses how the findings of the appraisal have been presented to inform the development of the Core Strategy.

2.2 Assessment of Initial Options and Housing Development Options

2.2.1 As discussed in **section 1.4.4**, six Initial Options were considered during the development of earlier versions of the Core Strategy. These options are as follows:

Table 2.1: Initial Options assessed through the Part 1 appraisal (2008)

Initial Options	
Initial Option 1:	Concentrate development in and on the edge of Stratford-upon-Avon
Initial Option 2:	Concentrate development in and on the edge of the larger rural towns and villages
Initial Option 3:	Spread development around most towns and villages throughout the district
Initial Option 4:	Focus development in the form of a new settlement or as a major expansion of an existing settlement
Initial Option 5:	Locate development along main public transport routes (existing or potential)
Initial Option 6:	Focus development on large brownfield (previously developed) sites in the countryside

2.2.2 **Table 2.2** sets out the four Housing Development Options subsequently considered in early 2010 (**section 1.4.8**). Included in the table is the distribution of housing development that would take place under each of the options, in conjunction with the three categories of settlement established for the district. Also included is the proportion of development that will take place on rural brownfield sites through the four options.

Table 2.2: Housing Development Options assessed through the Part 1 appraisal (2010)

	Housing Development Options			
Location	A: Focus on Stratford-upon-Avon	B: Focus on Main Rural Centres	C: Moderate Dispersal	D: Extensive Dispersal
Stratford-upon-Avon	50%	30%	35%	30%
Main Rural Centres	30%	50%	35%	30%
Local Service Villages	10%	10%	20%	30%
Rural Brownfield Sites	10%	10%	10%	10%

- 2.2.3 The assessment of the Initial Options and Housing Development Options has engaged a strategic level assessment technique which uses the SA Framework, the SA evidence baseline and the review of plans, programmes and policies to assess each alternative option. Findings are presented in matrix format and are accompanied by a commentary on and summary of identified effects.
- 2.2.4 The six Initial Options and four Housing Development Options have been appraised against the SA Framework of objectives and indicators developed through the scoping stage of the SA (**Appendix A**). Through this approach the appraisal has evaluated the likely sustainability performance of the options against each of the 15 SA Objectives included in the SA Framework, as follows.

Table 2.3: SA Objectives

SA Objective	
1	Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.
2	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities.
3	Protect, enhance and manage biodiversity and geodiversity.
4	Reduce the risk of flooding.
5	Minimise the district's contribution to climate change.
6	Plan for the anticipated levels of climate change.
7	Protect and conserve natural resources.
8	Reduce air, soil and water pollution.
9	Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.
10	Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.
11	Reduce barriers for those living in rural areas.
12	Protect the integrity of the district's countryside.
13	Provide affordable, environmentally sound and good quality housing for all.
14	Safeguard and improve community health, safety and well being.
15	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.

2.2.5 The full SA Framework, including objectives, decision making criteria, targets and indicators has been reproduced in **Appendix A**.

2.2.6 The findings of the assessment of the Initial Options and the Housing Development Options, including the appraisal matrix and commentary, have been presented in **Chapter 3**. These findings have been discussed through the 15 SA Objectives. This enables the reader to establish and to directly compare the likely sustainability performance of each of the options in relation to the full the range of sustainability issues considered through the SA process.

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3 Appraisal Findings: Initial Options (2008)

3.1 Strategic Assessment of the Initial Options: Summary

3.1.1 Table 3.1 presents an appraisal matrix summarising the assessment carried out on the Initial Options for the Core Strategy. This is accompanied by a detailed commentary discussing and comparing the options’ sustainability performance in relation to each of the SA Objectives.

Table 3.1: Summary of the assessment of the six Initial Options put forward for the Core Strategy

	SA Objective	Initial Option					
		IO1	IO2	IO3	IO4	IO5	IO6
1	Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	+/-	+/-	+/-	+/-	-	-
2	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities.	-	+/-	+/-	--	+/-	--
3	Protect, enhance and manage biodiversity and geodiversity.	+/-	+/-	+/-	-	+/-	--
4	Reduce the risk of flooding.	+/-	+/-	+/-	+/-	+/-	+/-
5	Minimise the district’s contribution to climate change.	++	+	--	+/-	++	--
6	Plan for the anticipated levels of climate change.	+/-	+/-	+/-	+/-	+/-	+/-
7	Protect and conserve natural resources.	-	+/-	+	--	+/-	+
8	Reduce air, soil and water pollution.	+/-	+/-	-	+/-	+	++
9	Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.	0	0	0	0	0	0
10	Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	++	+	-	+/-	++	--

	SA Objective	Initial Option					
		IO1	IO2	IO3	IO4	IO5	IO6
11	Reduce barriers for those living in rural areas.	--	+	+	-	+/-	-
12	Protect the integrity of the district's countryside.	-	-	+	--	+/-	-
13	Provide affordable, environmentally sound and good quality housing for all.	-	+	++	-	+/-	-
14	Safeguard and improve community health, safety and well being.	++	++	+/-	+/-	++	+/-
15	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.	+	+	+	-	++	-

Key, scorings:	
Likely strong positive effect	++
Likely positive effect	+
Neutral/no effect	0
Likely adverse effect	-
Likely strong adverse effect	--
Uncertain effects	+/-

Key, Initial Options:	
IO1:	Concentrate development in and on the edge of Stratford-upon-Avon
IO2:	Concentrate development in and on the edge of the larger rural towns and villages
IO3:	Spread development around most towns and villages throughout the district
IO4:	Focus development in the form of a new settlement or as a major expansion of an existing settlement
IO5:	Locate development along main public transport routes (existing or potential)
IO6:	Focus development on large brownfield (previously developed) sites in the countryside

3.2 Appraisal Commentary

SA Objective 1: Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance and SA Objective 2: Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities

3.2.1 The commentary below considers the findings of the assessment for SA Objectives 1 and 2 together. This approach has been taken due to the close link and interdependence between the district's historic environment and landscape/townscape resource.

3.2.2 In terms of Initial Option 1, focusing new development in and around Stratford-upon-Avon has the most potential of the six options to have effects on the integrity of the town's historic environment resource. With a conservation area covering most of the town centre and the riverside, and numerous listed buildings, the town has an exceptionally rich and valued historic environment (Figure 3.1). A number of locations in the vicinity of the town are also valued for their historic environment resource, as highlighted by the presence of designated conservation areas covering Shrottery, Clifford Chambers, Luddington and Alveston.

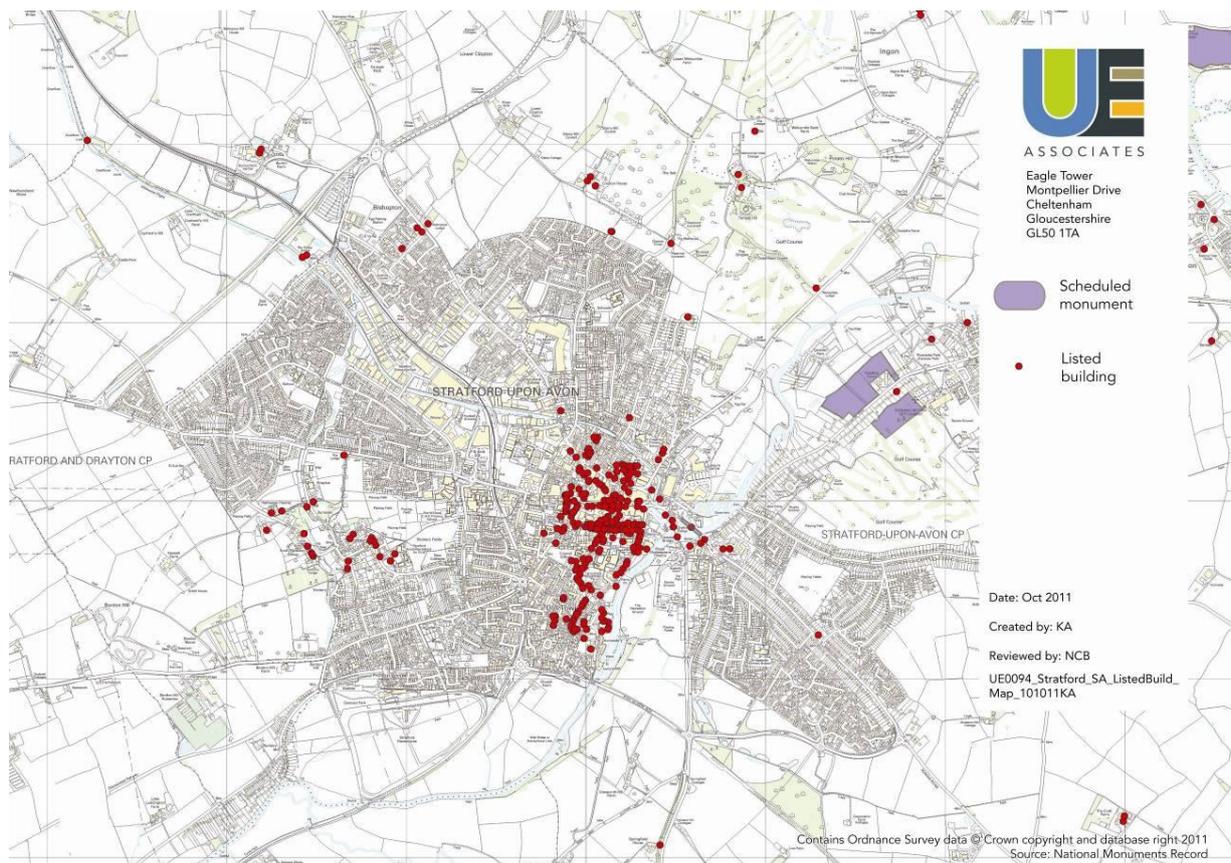


Figure 3.1: Listed buildings and scheduled monuments located in Stratford-upon-Avon

- 3.2.3 The effect of this option would however largely depend on the location of new development in the town. For example development in the north west of Stratford-upon-Avon is less likely to affect the historic setting of the town than development near the riverside. It should also be noted that a focus on Stratford-upon-Avon will help protect the setting and integrity of historic environment assets in other towns and villages in the districts; the value of which are highlighted by the location of over 70 of the district's 76 conservation areas at other locations in the district away from Stratford-upon-Avon.
- 3.2.4 Linked to this, concentrating development in and on the edge of the larger rural towns and villages as proposed by Initial Option 2 has the potential to affect the setting of a number of the main settlements in the district, and the context in which each town or village sits in the landscape. For example the historic environment value of towns and villages such as Bidford-on-Avon and Shipston-on-Stour are closely influenced by the landscape setting in which the settlements sit. The focus of Initial Option 2 on the rural towns and villages would therefore require careful siting and design of new development to ensure that the landscape setting of the historic environment is not adversely affected.
- 3.2.5 The aim of Initial Option 3 in spreading development around the towns and villages of the district has the potential to limit concentrated effects on historic environment assets and their landscape settings through limiting large scale effects on individual settlements. The option, through spreading development across Stratford-on-Avon is also likely to increase the ease of mitigating potential effects on the historic environment and landscape in the district.
- 3.2.6 Focussing development in the form of a new settlement or as a major expansion of an existing settlement (as promoted by Initial Option 4) is likely to have more concentrated effects on the historic environment and landscape quality. If located within sensitive areas of the district, taking forward new development through this option will have significant effects on the area's historic environment and landscape resource. It should be noted though that concentrating development through the approach put forward by Initial Option 4 may help secure enhancements to underutilised historic environment assets and assets at risk, or increase opportunities for rejuvenating historic environment features or areas of poor townscape quality. This may also be relevant for Initial Option 1, which concentrates development in Stratford-upon-Avon.
- 3.2.7 In terms of Initial Option 5, which seeks to locate development along main public transport routes, existing public transport routes are often in the most established parts of the district's towns and villages. For this reason these routes are often within the areas with the largest concentration of cultural heritage assets. For example there is a significant concentration of assets in the vicinity of the A3400 from Stratford-upon-Avon to Shipston-on-Stour (linked to the settlements located in or adjacent to the River Stour valley). It should be noted however that increasing traffic flows and congestion in the district have been affecting the integrity of historic environment assets and their settings. This has led to pressures on historic landscape quality and the loss of character and integrity of the historic built environment and its setting. Initial Option 5's contribution to a limitation of traffic growth over the wider district may have the potential to limit effects on the historic environment and landscape quality (including tranquillity) from traffic and congestion.

3.2.8 Focussing development on large brownfield sites in the countryside as promoted by Initial Option 6 has the potential to have significant effects on landscape quality. Alongside historic land uses on these sites may lead to significant effects on features, both seen and unseen, of archaeological interest. For example former airfields may have potential archaeological interest linked to military or aviation uses. Similarly the historic setting of the brownfield sites are likely to be significantly affected.

3.2.9 Overall, the effect of the Initial Options on the district's rich historic environment and valued landscape resource will largely depend on the design, layout and location of new development within growth areas.

SA Objective 3: Protect, enhance and manage biodiversity and geodiversity

3.2.10 The effect of the Initial Options on the district's biodiversity and geodiversity resource will depend on the location, layout and design of new development. It will also depend on the incorporation of improved green infrastructure provision and the extent to which new development has due regard to the aims of PPS9, the biodiversity duty placed on local authorities by the Natural Environment and Rural Communities Act (HM Government, 2006) and the Natural Environment White Paper (HM Government, 2011).

3.2.11 Whilst it is difficult in general terms to undertake a meaningful appraisal at this high level of strategic assessment in relation to biodiversity and geodiversity, a number of broad conclusions can be made. Initial Option 1 has increased potential to have effects on brownfield and greenfield assets in and around Stratford-upon-Avon, including more sensitive areas around the town such as the corridor of the River Avon and the racecourse (**Figure 3.2**) and the Welcombe Hills Nature Reserve. Initial Option 2 has the potential to have impacts on biodiversity assets in and on the edge of the district's larger rural towns and villages. By spreading development, Option 3 has the potential to increase opportunities for avoiding sensitive sites. Design features within new developments may enhance biodiversity value.

3.2.12 By focussing development in the form of a new settlement or as a major expansion of an existing settlement, Option 4 has the potential to have significant effects on the biodiversity resource of the area where the development takes place. Such an approach is also likely to offer opportunities to provide significant new biodiversity infrastructure through the incorporation of new and improved multifunctional green infrastructure networks.

3.2.13 Option 5 has the potential to affect biodiversity assets along transport routes. This in particular may have impacts on local and sub-regional biodiversity corridors and networks: for example existing and historic rail, road and canal corridors are often important biodiversity linkages, or areas with interesting and valued geodiversity outcrops.

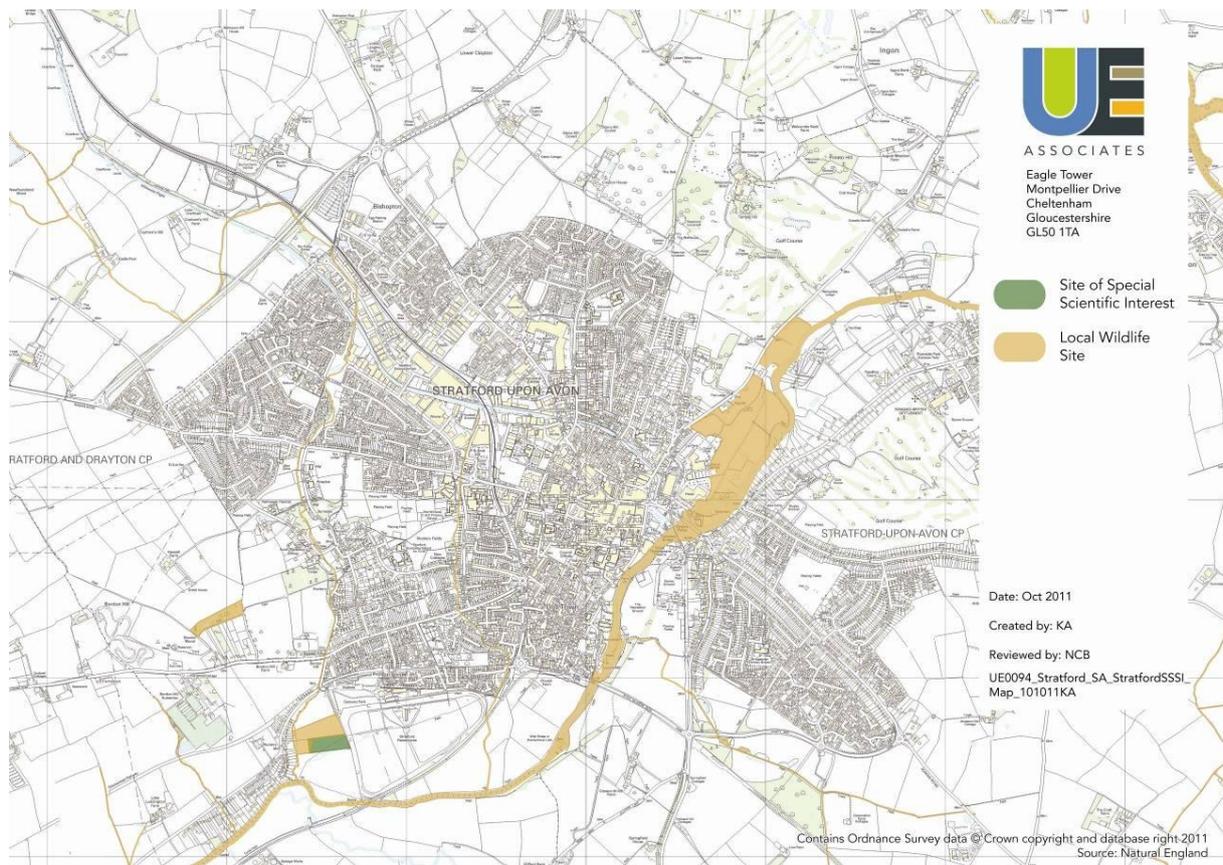


Figure 3.2: Location of SSSIs and Local Wildlife Sites in and around Stratford-upon-Avon

3.2.14 In terms of Initial Option 6, focussing development on large previously developed sites has the potential to have significant effects on brownfield biodiversity in the areas affected. In this context brownfield sites which have lain derelict for some time frequently include habitats which support protected and rare species. As for Initial Option 4, this approach however provides significant opportunities for green infrastructure improvements in development areas.

SA Objective 4: Reduce the risk of flooding

3.2.15 Flood risk from fluvial flooding is major issue for the district, and affects many of the district's main settlements. For example the recent July 2007 flood event led to: 110 properties being flooded in Alcester; 60 properties being flooded in Bidford-on-Avon; 100 properties being flooded in Shipton-on-Stour; 10 properties being flooded in Southam; 75 properties being flooded in Stratford-upon-Avon; 70 properties being flooded in Wellesbourne; and 100 properties being flooded in Henley-in-Arden (Environment Agency, 2007). Flooding from surface water is also an issue in many settlements.

3.2.16 The significance of flood risk for many settlements in the district is highlighted in **Figure 3.3**.

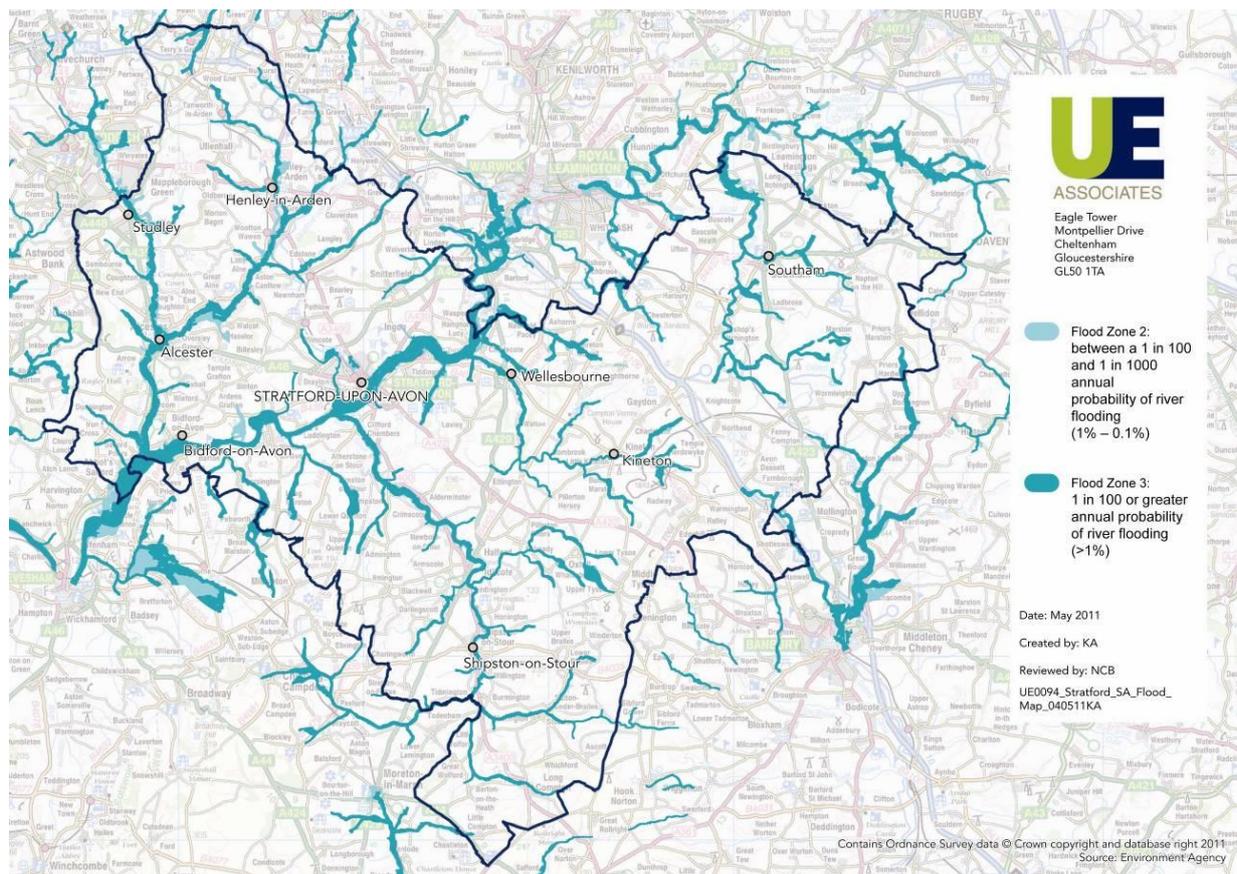


Figure 3.3: Flood Risk Zones in Stratford-on-Avon district

3.2.17 In this context each of the Initial Options have the potential to lead to development in flood risk areas if appropriate locational policies are not promoted by the Core Strategy. Initial Option 1 may lead to increased flooding in and around Stratford-upon-Avon. Initial Option 2 may lead to an increased risk of flooding in the larger rural towns and villages linked to flooding on the River Avon, Itchen, Stour, Dene, Arrow and Alne. Initial Option 3 may lead to increased flood risk in a wider range of towns and villages. Initial Option 4 may lead to increased flood risk both in the proposed growth area and potentially at locations downstream; Initial Option 5 may lead to increased flood risk in areas of flood risk crossed by transport routes; and Initial Option 6 may lead to increased flood risk from development on large brownfield sites located within flood risk areas.

3.2.18 The effect of the Initial Options on the risk of flooding therefore largely depends on the location of development in conjunction with areas of flood risk. In this context the extent to which the Core Strategy ensures that the Strategic Flood Risk Assessment which has been carried out for the district (Halcrow, 2008) is a central consideration for deciding the location of new development will determine the extent to which the Core Strategy supports a reduction of flood risk in the district. Similarly the extent to which the Core Strategy encourages the use of sustainable drainage systems, deculverting and other measures to limit flood risk from surface water run off will also determine how well the options perform in relation to this SA Objective (and SA Objective 6, see **section 3.2.24** below).

SA Objective 5: Minimise the district's contribution to climate change

- 3.2.19 The extent to which the six Initial Options will help limit or reduce greenhouse gas emission depends largely on the proposed locations for development put forward by the options.
- 3.2.20 A major, and increasing input into greenhouse gas emissions in Stratford-on-Avon is from transport. With relative affluence, and the rural nature of much of the district, car ownership is high, and there is a considerable level of out commuting by car. Road transport is by far the biggest contributor to greenhouse gas emissions in Stratford-on-Avon, contributing to almost half, or 46% of the district's total emissions (compared to 26% for industry and commercial and 26% for domestic sources). Limiting emissions from road transport is therefore a significant factor for climate change mitigation in the district.
- 3.2.21 Due to road transport's contribution to greenhouse gas emissions in the district, the options which have the potential to support climate change mitigation are those that will help reduce the need to travel. In this context the option which focuses development in and around Stratford-upon-Avon (Initial Option 1) will support reductions in greenhouse gas emissions by maximising accessibility from new areas of development to shops, facilities and services in the town, and supporting accessibility to high quality public transport networks in the town, including the rail network. Similarly, Initial Option 2, which seeks to concentrate the development of new housing areas in the larger settlements of the district, which are the locations outside of Stratford-upon-Avon with the broadest range of services and amenities, will also help limit greenhouse gas emissions from transport. Initial Option 5 will also help limit emissions from transport by focussing development on public transport corridors.
- 3.2.22 Spreading development around most towns and villages throughout the district as promoted by Initial Option 3 is less likely to concentrate development in the areas with good access to services, amenities and public transport networks. This has the potential to increase the need to travel and encourage car-based commuting. As a result Option 3 is less likely to support climate change mitigation. Initial Options 4 and 6 will also require significant new transport infrastructure, including new public transport links and walking and cycling networks to limit greenhouse gas emissions from transport.
- 3.2.23 Otherwise the options are too high level for the appraisal to determine to what extent energy efficient and low carbon development, or new renewable energy provision is included within new development in the district.

SA Objective 6: Plan for the anticipated levels of climate change

- 3.2.24 The effects of climate change in the district are likely to include the following: decreasing summer rainfall and increasing winter rainfall; more extreme heat events such as that seen in the summer of 2003; fewer snowfall events; increased wind speeds and an increase in storm events; average annual temperature increase of between 1°C and 2.5°C; drier (up to 30%) warmer summers and wetter (up to 20%) and warmer winters; and drier soils in summer and higher soil moisture levels in winter increasing the probability of flooding (source: UK Climate Change Impacts 09). The Core Strategy will play a key role in deciding how successfully Stratford-on-Avon adapts to these effects.

3.2.25 The Initial Options provide six very high level distributional alternatives for new development. On aspects such as flooding, the urban heat island effect (where, due to heat retention, built up areas become warmer than the surrounding countryside), landscape change, impacts on biodiversity and the other aspects linked to the likely effects of climate change on the district, the effect of each Initial Option will depend on the detailed location, layout and design of development. In particular the extent to which the Core Strategy encourages development which utilises design and layout which supports adaptation to climate change will be key to this SA Objective. This can include through: new and enhanced green infrastructure provision, appropriate shading and planting, solar control, increased ventilation, improved drainage (and where appropriate, SuDS), green roofs, management of flood pathways, rain harvesting and storage, grey water recycling and a range of other approaches. In this context the Initial Options do not provide sufficient detail to determine the extent to which development will support effective adaptation to the effects of climate change.

3.2.26 The aspects linked to climate change relevant to flooding have been discussed in **section 3.2.15**.

SA Objective 7: Protect and conserve natural resources

3.2.27 In terms of the efficient use of land, Initial Option 6 seeks to focus development on previously developed land on large brownfield sites. This will help limit development which takes place on greenfield sites. In a similar context, spreading new housing and employment provision throughout the district as promoted by Initial Option 3 increases the likelihood of new provision being able to take place on previously developed land, which is particularly relevant as the availability of brownfield land in a number of the district's towns and villages is limited.

3.2.28 Due to their nature as locational options, how new development taken forward through the Initial Options incorporates energy efficiency measures or utilises renewable energy provision will be influenced by the design of the thematic Core Strategy policies. Similarly, issues such as water efficiency measures, sustainable waste management or the utilisation of recycled and reused materials in new development will also be addressed by the thematic Core Strategy policies. These issues will be considered later in the SA process through the assessment of draft Core Strategy policies.

SA Objective 8: Reduce air, soil and water pollution

Air Quality

3.2.29 Air quality issues in the district are focussed in Stratford-upon-Avon, Studley and Henley-on-Arden, as highlighted by the recent declaration of air quality management areas in these settlements. All three AQMAs designated in the district have been declared due to exceedences of the annual mean objective for nitrogen dioxide, linked to emissions from transport.

- 3.2.30 Initial Option 1, which focuses new development in and around Stratford-upon-Avon, has the potential to contribute to significant increases in traffic flows in the vicinity of the town. This will have implications for emissions of nitrogen dioxide from transport. Similarly, air quality in Henley-in-Arden and Studley is most likely to be affected by Initial Option 2, which seeks to concentrate development in and on the edge of the major settlements in the district. Initial Options 1 and 2 focus development in the largest towns and villages in the district. This is likely to have sustainability benefits.
- 3.2.31 Of the other options, Initial Option 4, through concentrating development in a new settlement or as a major expansion of an existing settlement also has the potential to lead to new air quality issues locally, depending on the location and layout of development in conjunction with existing or new sustainable transport networks. Initial Option 5, through locating new development near existing or new public transport routes has the potential to limit air pollution by encouraging modal shift and supporting the use of sustainable modes of transport such as public transport, walking and cycling. The effect of the option on local air quality issues will however depend on the location of new development in conjunction with existing air quality issues along public transport routes. In this context new development at locations such as along Alcester Road in Studley or on the main routes into Stratford-upon-Avon may have further implications for air quality issues in these areas.
- 3.2.32 Spreading development throughout the district through taking forward Initial Option 3 is less likely to significantly contribute to issues at existing air quality hotspots. It should be noted though that a broad spread of development may increase car use through limiting accessibility to local and sub-regional services, facilities and amenities. This may have less tangible implications for air quality over a wider area. Similarly, focussing development on brownfield sites in the countryside may contribute to traffic growth for the same reasons.

Water and Soil Quality

- 3.2.33 In terms of water and soil quality, the effect of the options is likely to depend on the extent to which the Core Strategy seeks to limit and reduce the release of diffuse and point source pollutants into local watercourses and soil. It will also depend on the extent to which the Core Strategy promotes the use of high quality drainage systems in the district, including SuDS where appropriate. The options which promote a greater degree of development on previously developed land (including Initial Option 3 and Initial Option 6) are more likely to involve a greater degree of soil remediation on brownfield sites. This has the potential to support soil and water quality.

SA Objective 9: Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal

3.2.34 Due to the high level strategic nature of the options, the provision of improved recycling facilities and the encouragement of sustainable waste management have not been addressed by the Initial Options. Although household recycling rates in Stratford-on-Avon are very high by national standards (59% for Stratford-on-Avon in 2009/10 compared to 40% regionally and nationally in the same period (Defra, 2010)), the Core Strategy should aim to ensure provision of sustainable waste management facilities for new and existing development and focus on the minimisation of waste in conjunction with the Warwickshire Minerals and Waste Development Framework. To support national, county and district-wide objectives in relation to sustainable waste management, the Core Strategy should therefore seek to support the development of waste facilities at sustainable locations, engage the local employment, reduction, reuse or recycling of waste, and where appropriate, realise the opportunities for renewable energy generation through waste. At the same time the Core Strategy should recognise the impacts that waste management can have on noise, soil and air quality; the built environment and the setting of cultural heritage assets; flora and fauna; and effects on residents' quality of life.

SA Objective 10: Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel

3.2.35 A number of key sustainability issues are linked to transport and accessibility in the district. This includes congestion issues in and around Stratford-upon-Avon and a number of the other towns and villages in the district; poor accessibility to services, facilities and amenities from rural areas; high car dependency and access issues for those without access to a car; the need to mitigate the adverse impacts of traffic; and the effect of proposed residential, employment and retail growth on the district's transport networks.

3.2.36 Stratford-upon-Avon, as the primary settlement of the district, has the broadest range of services, facilities and amenities. It is also the centre of the north of the district's public transport networks, and is linked by rail to a range of destinations. In this context, Initial Option 1, through focussing development in and around the town is most likely to support accessibility from new development areas to services, facilities and opportunities, and reduce the need to travel. It is also most likely to encourage the use of public transport and walking and cycling networks. The focus of development on the town however may lead to adverse effects on traffic and congestion without significant improvements in public transport and walking and cycling infrastructure.

3.2.37 Initial Option 2 is also likely to support this SA Objective. The main settlements in the district (including Stratford-upon-Avon, Shipston-on-Stour, Henley-in-Arden, Studley, Bidford-on-Avon, Wellesbourne and Kineton) are the locations with the largest concentration of services, facilities and amenities in the district. They also tend to be better connected by public transport networks than other locations in the district. For this reason, although to a likely lesser extent than Initial Option 1, Initial Option 2 will limit the need to travel and promote public transport use and walking and cycling.

- 3.2.38 Initial Option 3, through spreading development around most towns and villages in the district, is less likely to support development which is focussed in the most accessible locations by walking and cycling or public transport. This is less likely to reduce high car dependency in the district, or improve accessibility to services, facilities and amenities from rural areas or reduce the need to travel. Similarly it may increase the proportion of residents commuting significant distances by car for jobs and employment purposes. It should be noted however that the option may support the viability of existing services and facilities at some locations through an increase in population size, reducing the need to travel to such services for local people.
- 3.2.39 Taking forward Initial Option 4 and 6 will require significant new and/or improved public transport and pedestrian and cycle infrastructure to limit car use and promote sustainable modes of transport. It should be noted however that in taking forward these options there is significant potential to effectively deliver such infrastructure to accompany new housing, employment and service provision. This is due to the options focussing development in one location, increasing opportunities to provide new public transport and walking and cycling provision which meets the needs of those living in the new development areas. Initial Option 6 however is less likely to support existing transport infrastructure due to the location of proposed development on large brownfield sites in the countryside. The location of new development under Initial Option 6 is also more likely to encourage traffic growth due to the increased distances that will be required to access services, amenities and opportunities inside and outside of the district.
- 3.2.40 Overall, Initial Option 5 is likely to perform the most favourably in relation to SA Objective 10, as new development will be focussed along existing and new public transport corridors. This will maximise accessibility by non car modes, encouraging modal shift and helping to limit car use. It will also encourage walking and cycling through maximising the proximity of public transport infrastructure to where residents live and work.

SA Objective 11: Reduce barriers for those living in rural areas

- 3.2.41 Initial Option 1, through focussing development in Stratford-upon-Avon is less likely to support the vitality and viability of other towns and villages in the district. Due to the importance of district's smaller settlements for many, the option is less likely to improve accessibility to services, facilities and amenities for those living in rural areas who do not have access to a car. Similarly, Initial Option 4, which focuses development within a new settlement or an urban extension will also do less overall to support accessibility to services and opportunities from rural areas in the district.
- 3.2.42 Initial Option 2, through focussing development in the larger towns and villages is less likely to support the viability of services and facilities in the smaller rural settlements in the district. However the larger towns and villages of the district are important service centres for their rural hinterland, and an increase in the settlements' population may improve the range of facilities available and the viability of the towns and villages as service centres. The effect of this option in relation to this SA Objective will therefore depend on the extent to which new development in the main settlements is accompanied by enhancements to service provision, and improvements to public transport networks from the towns and villages' rural hinterlands.

- 3.2.43 Initial Option 3, through spreading development around most towns and villages throughout Stratford-on-Avon is likely to support rural services and facilities in some locations by helping to promote the viability of smaller settlements in the district. In this context, the extent to which new development will support accessibility to local services from rural areas depends on the degree to which new housing provision is accompanied by new facilities and amenities.
- 3.2.44 Of the remaining two options, Initial Option 5 may support accessibility from rural areas through focussing services and amenities along public transport routes. This depends however on the accessibility of public transport services utilising these routes from rural areas. Initial Option 6, through focussing development on large brownfield sites in the countryside, whilst potentially supporting accessibility to services and amenities from rural areas in locations surrounding these sites, are unlikely to support the viability and vitality of existing settlements important for service provision for those living in rural areas.

SA Objective 12: Protect the integrity of the district's countryside

- 3.2.45 Due to the proposed location of new development put forward through these options, a number of the Initial Options are likely to lead to increased development on greenfield sites on the edge of settlements in the district. These include Initial Option 1, which has the potential to lead to significant new areas of development on the edge of Stratford-upon-Avon, Initial Option 2, which may lead to significant areas of new development around the main towns and villages in the district and Initial Option 4 which may either lead to development on significant greenfield sites in the form of a new settlement or through the expansion of an existing settlement. In this context these options have the potential to lead to the loss of higher quality agricultural land, and lead to effects on landscape character and local distinctiveness (in the context of Option 2, as suggested by **Figure 3.4**, development located around Wellesbourne, Bidford-on-Avon and Shipston-on-Stour has particular potential to lead to the loss of the best and most versatile agricultural land). The options also have the potential to lead to the degradation of areas of land on the urban fringe which are earmarked for potential development if each option is progressed. Likewise, Initial Option 6 has the potential to lead to significant development on previously developed land in rural areas, with implications for landscape quality and character, tranquillity and the integrity of the countryside.

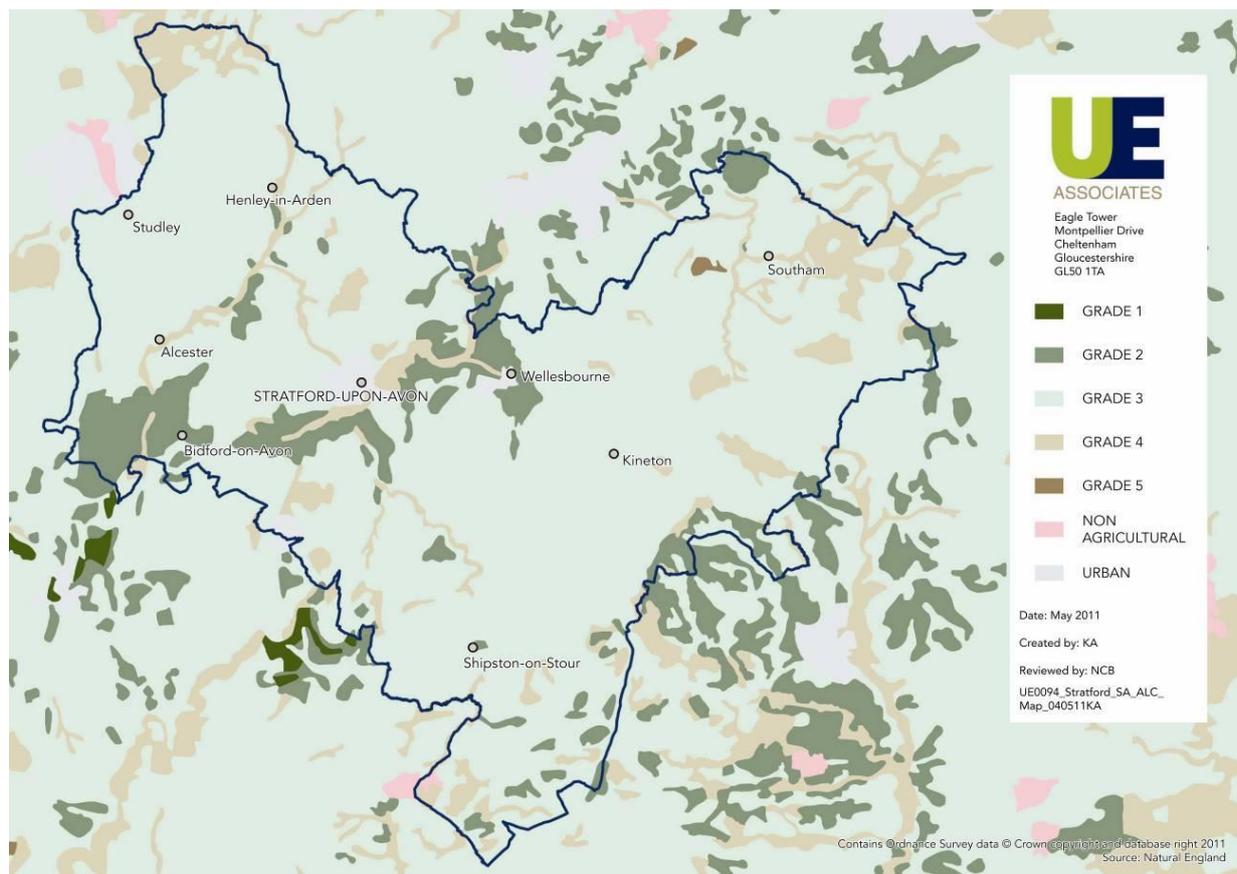


Figure 3.4: Agricultural Land Classification in Stratford-on-Avon

3.2.46 Initial Option 3 is unlikely to lead to large scale development on the edge of towns and villages on greenfield land. Similarly development progressed through Initial Option 5, by focussing on public transport routes, is less likely to lead to adverse effects on the integrity of the countryside through loss of agricultural land and impacts on the character and landscape of rural areas. This however depends on the location of public transport routes earmarked for new housing and employment provision.

SA Objective 13: Provide affordable, environmentally sound and good quality housing for all

3.2.47 In terms of the delivery of housing in Stratford-on-Avon, the Core Strategy is likely to promote district-wide targets for affordable housing provision in conjunction with the aims of the district's Housing Strategy and Sustainable Community Strategy, and to reflect the findings of the Strategic Housing Market Assessment, Housing Provision Options Study and other studies which have been carried out for the district. In this context, which of the six Initial Options are taken forward by the Core Strategy will determine where in the district new housing (including affordable housing) will be delivered.

- 3.2.48 In this context Initial Option 1, through focussing new housing in and around Stratford-upon-Avon is less likely to support the delivery of housing in other settlements in the district. In particular the option is less likely to increase the supply of affordable housing in some of the least affordable areas of the district, including rural communities. Similarly a new settlement or major expansion of an existing settlement as promoted by Initial Option 4, and focussing development on large brownfield sites in the countryside through Initial Option 6 will limit opportunities to provide affordable housing where it is in most demand in the district.
- 3.2.49 Initial Option 3, which promotes a greater degree of development in the smaller rural settlements of the district, will instead help increase the supply of affordable housing in rural communities, where demand for affordable housing in the district is the highest. This is particularly relevant as 45% of the population live in parishes with fewer than 3,000 people (SDC, 2008b). Likewise, Initial Option 2 will help increase affordable housing provision in the larger towns and villages in the district. This is significant as nearly 80% of the total level of net unmet housing need in the district is located outside Stratford-upon-Avon, as highlighted by the findings of the Joint Housing Assessment for South Warwickshire 2006 (SDC and WDC, 2006).
- 3.2.50 Initial Option 5's effect in relation to SA Objective 13 will depend on the location of the public transport routes on which new development will be focussed.

SA Objective 14: Safeguard and improve community health, safety and well being

- 3.2.51 Due to the distributional and strategic nature of the Initial Options, a large factor determining the options' likely sustainability performance in relation to health and wellbeing is linked to residents' accessibility to health services and sports, leisure and recreational facilities. From this perspective, the options which are likely to facilitate ease of access to such amenities are likely to perform more favourably in relation to this objective.
- 3.2.52 Initial Options 1 and 2, by locating the majority of development at locations in the district with the broadest range of health, leisure and sports facilities, including Stratford-upon-Avon, Shipston-on-Stour, Henley-in-Arden, Studley, Bidford-on-Avon, Wellesbourne and Kineton, will help support accessibility to these amenities. Similarly, through seeking to locate development along main transport routes, Initial Option 5 will promote access to services and facilities. In contrast, Initial Option 3 has the potential to support development at locations with limited or no health services and/or leisure and recreational facilities.
- 3.2.53 The extent to which Initial Option 4 and 6 promote accessibility to health services and sports, leisure and recreational facilities depends on the location of new development, and the extent to which new development is accessible to existing services. It will also depend on the provision of new facilities to serve new areas of growth in these areas. It should be noted therefore that this can be applied to each of the six options' sustainability performance in relation to health and wellbeing. In this context the extent to which new growth in the district supports health and wellbeing will also depend on the provision of new health facilities to accompany new development, and improvements in public transport where required.

3.2.54 Another factor which will influence health and wellbeing in the district is the extent to which new development encourages healthier and more active lifestyles. In this context the options which promote walking and cycling as viable alternatives to the private car will support health and wellbeing. Initial Options 1, 2 and 5 will therefore promote walking and cycling through focussing development at the locations with the largest concentration of services, facilities and amenities in the district and the most comprehensive public transport networks. The extent to which the remaining options promote more active lifestyles will depend on the location, design and layout of new growth areas and the provision of accessible and useable open space as part of high quality local and district-wide green infrastructure networks.

SA Objective 15: Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.

3.2.55 By focussing new growth in Stratford-upon-Avon, Option 1 will support the economy of the largest town in the district. With development proposals being located in and around the town, the option is less likely to promote the vitality and viability of other settlements in the district or significantly improve job opportunities outside Stratford-upon-Avon. In this context Option 2 will also support the local economy of towns and villages such as Henley-in-Arden, Studley, Bidford-on-Avon, Wellesbourne, Kineton and Shipston-on-Stour and promote local employment. The more spread out pattern of growth put forward through Initial Option 3 may also support the viability and vitality of smaller settlements in the district, and benefit the rural economy. The extent to which Initial Options 2 and 3 support individual settlements' economies depends however on the scale, type and location of development taken forward in and around each town and village.

3.2.56 The contribution of the Initial Options in supporting sustainable economic growth in the district will also depend on the extent to which existing, expanded and new employment sites are supported by improvements in public transport provision and walking and cycling networks, and are located in areas accessible to local residents. Locating new employment provision in accessible areas will enable local people to benefit from new opportunities and support more sustainable patterns of growth. In this context Initial Option 5 seeks to encourage new growth to take place along main public transport routes, and Initial Options 1 and 2 will promote the development of new employment provision in the towns and villages where a large proportion of the district's population lives.

3.2.57 In terms of Initial Option 4, which seeks to focus new development within a new settlement, or as a major expansion of an existing settlement, the option is less likely to support the vitality and vibrancy of other towns and villages in the district as new housing and employment provision will be situated at one location. Initial Option 6, through focussing development on large brownfield sites in the countryside, is similarly unlikely to significantly promote the local economies of the district's towns and villages.

3.3 Summary of the Appraisal of the Initial Options

- 3.3.1 Due to the high level strategic nature of the Initial Options, and their exclusively distributional nature, in many cases it has been difficult to establish in detail the likely sustainability performance of each option. This is particularly the case as each option's effect is largely dependent on the detailed location, design, layout and type of development proposed, and the additional and improved infrastructure and service provision introduced to support new growth areas in the district. In this context the thematic policies introduced for the Core Strategy will have a close influence the sustainability performance of new development taken forwards in the district.
- 3.3.2 Initial Options 1 and 2, and Initial Option 5, will do most to promote residents' accessibility to services and facilities, promote modal shift and support health and wellbeing. These options are likely to have the largest potential to support climate change mitigation through limiting greenhouse gas emissions from transport.
- 3.3.3 In terms of the protection and enhancement of the historic environment and landscape quality, and the protection of biodiversity assets, Initial Option 3, which promotes a greater spread of development in the district, performs most favourably in relation to the related SA Objectives. This will in part be through limiting the need for significant extensions to existing settlements, and increasing opportunities for mitigating potential effects from new development on the built and natural environment. The option also has more potential to support the vitality and viability of rural settlements.
- 3.3.4 In general, Initial Option 4, which focuses development within a new settlement, or as an extension to an existing settlement, and Initial Option 6, which focuses development on large brownfield sites, perform the least favourably of the options in relation to the SA Objectives. This is due to the potential effects of the options locally on aspects such as landscape quality, the historic environment and biodiversity assets, and the likely requirement for new development taken through the options to initiate significant new infrastructure (including green infrastructure and sustainable transport infrastructure) to limit and mitigate effects. The options are also likely to do less to promote the vitality of existing settlements in the district, including rural settlements, or support climate change mitigation.

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4 Appraisal Findings: Housing Development Options (2010)

4.1 Strategic Assessment of the Housing Development Options: Summary

4.1.1 **Table 4.1** presents an appraisal matrix summarising the assessment carried out on the Housing Development Options put forward by the February 2010 Consultation Core Strategy. This is accompanied by a detailed commentary discussing and comparing the options' sustainability performance in relation to each of the SA Objectives.

Table 4.1: Summary of the assessment of the Housing Development Options

	SA Objective	Housing Development Option			
		HD A	HD B	HD C	HD D
1	Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	+/-	+/-	+/-	+/-
2	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities.	+/-	+/-	+/-	+/-
3	Protect, enhance and manage biodiversity and geodiversity.	+/-	+/-	+/-	+/-
4	Reduce the risk of flooding.	+/-	+/-	+/-	+/-
5	Minimise the district's contribution to climate change.	++	+	-	--
6	Plan for the anticipated levels of climate change.	+/-	+/-	+/-	+/-
7	Protect and conserve natural resources.	+	+	+	+
8	Reduce air, soil and water pollution.	+/-	+/-	+/-	+/-
9	Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.	0	0	0	0

	SA Objective	Housing Development Option			
		HD A	HD B	HD C	HD D
10	Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	++	+	+/-	-
11	Reduce barriers for those living in rural areas.	+/-	+	+	++
12	Protect the integrity of the district's countryside.	-	-	+/-	+/-
13	Provide affordable, environmentally sound and good quality housing for all.	+	++	++	++
14	Safeguard and improve community health, safety and well being.	++	++	+/-	+/-
15	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.	+	+	+	+

Key, scorings:

Likely strong positive effect	++
Likely positive effect	+
Neutral/no effect	0
Likely adverse effect	-
Likely strong adverse effect	--
Uncertain effects	+/-

Key, Housing Development Options:

HD A:	Concentrate development in and on the edge of Stratford-upon-Avon
HD B:	Concentrate development in and on the edge of the larger rural towns and villages
HD C:	Spread development around most towns and villages throughout the district
HD D:	Focus development in the form of a new settlement or as a major expansion of an existing settlement

4.2 Appraisal Commentary

SA Objective 1: Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance and SA Objective 2: Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities

4.2.1 Similar to the approach taken for the Initial Options (section 3.2.1), the commentary below considers the findings of the assessment for SA Objectives 1 and 2 together. This approach has been taken due to the close link and interdependence between the district's historic environment and landscape/townscape resource.

4.2.2 The relative dispersal of housing as promoted by the four Housing Development Options will limit more focussed effects on the historic environment of individual settlements. Designated cultural heritage features are however located across the district (Figure 4.1), and potential effects may occur through all of the options if careful design and layout of development which seeks to protect and enhance the historic environment is not promoted.

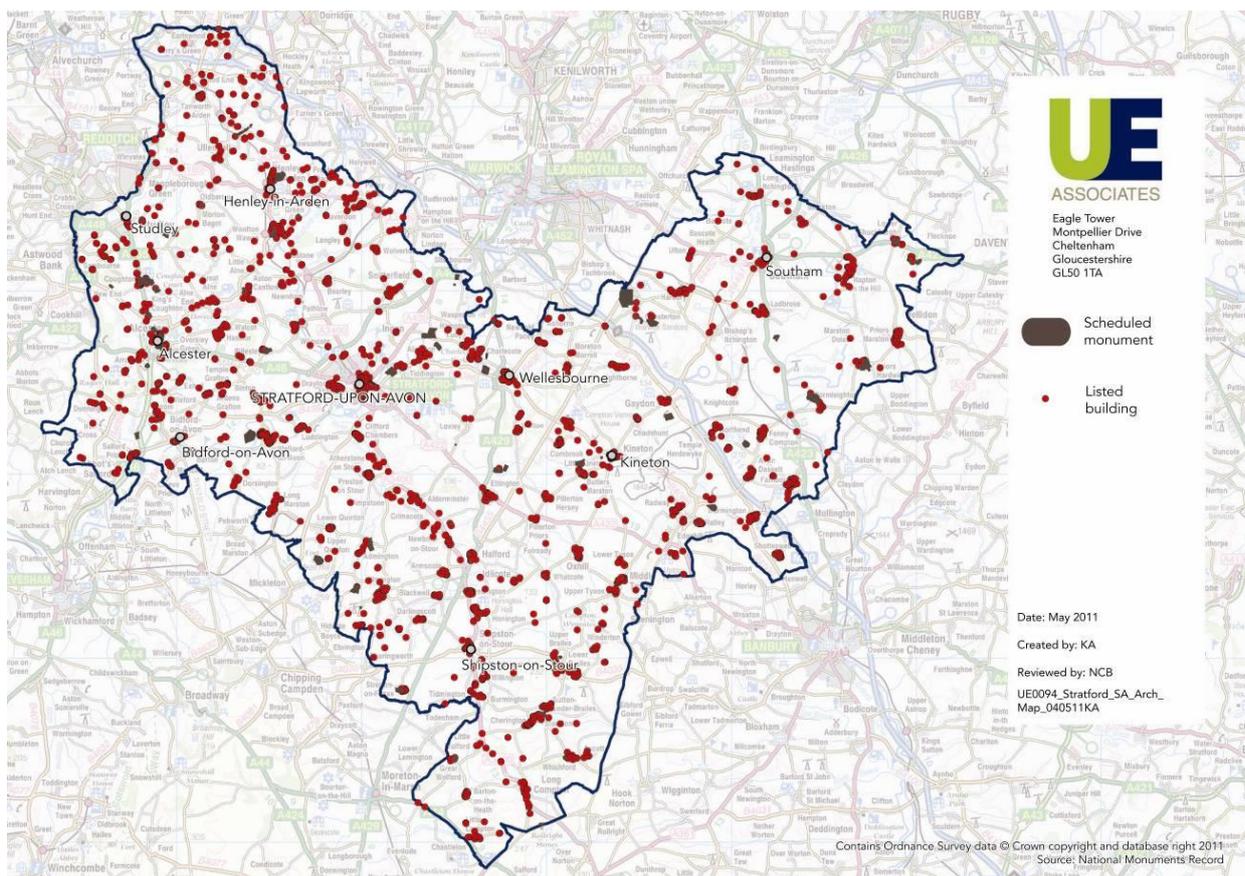


Figure 4.1: Listed buildings and Scheduled Monuments in Stratford-on-Avon

- 4.2.3 In terms of Housing Development Option A, focusing 50% of new development in and around Stratford-upon-Avon has the most potential of the four options to have effects on the integrity of the town's historic environment resource, and heritage features, areas and their settings. In this respect, Option B, C and D, which respectively propose that 30%, 35% and 30% will take place in and around Stratford-upon-Avon, will have less of an effect on the town's historic environment.
- 4.2.4 As previously highlighted in **section 3.2.1**, the effect of the options largely depends on the location of new residential development in the town. For example development in the north-west of Stratford-upon-Avon is less likely to affect the historic setting of the town than development near the riverside. It should also be noted that an increased focus on Stratford-upon-Avon will help protect the setting and integrity of historic environment assets in other towns and villages in the district; the value of which are highlighted by the location of over 70 of the district's 76 conservation areas at other locations in the district away from Stratford-upon-Avon.
- 4.2.5 In this respect Housing Development Option B is likely to have an increased effect on the historic environment in the Main Rural Centres of Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne. All of these settlements have areas of historic environment value, and the cultural heritage resource of the Main Rural Centres is reflected by the presence of conservation areas and listed buildings in each of the settlements. Landscape and townscape quality in and around the Main Rural Centres is likely to be affected by Housing Development Option B.
- 4.2.6 Housing Development Options C and D are likely to have an increased effect on the historic environment and landscape/townscape value of the 38 Local Service Villages in the district through respectively locating 20% and 30% of new development in these settlements. The greater spread of development through the two options however has the potential to limit concentrated effects on historic environment assets and their landscape settings through limiting large scale effects on individual settlements. The option, through broadening housing development across more settlements in the district, is also likely to increase the ease of mitigating potential effects on the historic environment and landscape.
- 4.2.7 Through promoting a similar proportion of residential development on rural brownfield sites, the four options will have similar effects on sites, features and areas of historic environment value at these locations. Depending on the specific location of such development, due to historic land uses on these sites, the options therefore have the potential to lead to effects on features, both seen and unseen, of archaeological interest.

SA Objective 3: Protect, enhance and manage biodiversity and geodiversity

- 4.2.8 As for the Initial Options, the effect of the Housing Development Options on the district's biodiversity and geodiversity resource will depend on the location, layout and design of new development. It will also depend on the incorporation of improved green infrastructure provision and the extent to which new development has due regard to the aims of PPS9 (CLG, 2009), the biodiversity duty placed on local authorities by the Natural Environment and Rural Communities Act (2006) and the Natural Environment White Paper (2011).

- 4.2.9 Whilst it is difficult in general terms to undertake a meaningful appraisal at this high level of strategic assessment in relation to biodiversity and geodiversity, a number of broad conclusions can be made. Housing Development Option A has increased potential to have effects on brownfield and greenfield assets in and around Stratford-upon-Avon, including more sensitive areas around the town such around the river corridor and racecourse and the Welcombe Hills. Housing Development Option B has the potential to have impacts on biodiversity assets in and on the edge of Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne. Housing Development Options C and D, through encouraging a more widely distributed pattern of residential development, has the potential to increase opportunities for avoiding sensitive sites, mitigating potential effects and incorporating features within new housing development areas which enhance biodiversity value. The options may lead to effects on biodiversity habitats, species and sites in and around the smaller Local Service Villages than Housing Development Options A and B.
- 4.2.10 Brownfield sites which have lain derelict for some time frequently include habitats which support protected and rare species, depending on the design of green infrastructure networks to accompany development at such locations. The four Housing Development Options, through proposing that 10% of residential development will take place on rural brownfield sites, may therefore have effects on brownfield biodiversity in the areas affected.

SA Objective 4: Reduce the risk of flooding

- 4.2.11 As highlighted in **section 3.2.15**, flood risk from fluvial flooding is major issue for the district, and affects many of the district's main settlements. Flooding from surface water is also an issue in many settlements and has contributed to recent flood events, including the major flood event of July 2007.
- 4.2.12 The four Housing Development Options all have the potential to lead to development in flood risk areas if appropriate locational policies are not promoted by the Core Strategy. In this context, of the options, Housing Development Option A may lead to the larger effects on flood risk in and around Stratford-upon-Avon; Housing Development Option B may lead to an increased risk of flooding in Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne; and Housing Development Option C and D may have more implications for flood risk in the Local Service Villages.
- 4.2.13 The effect of the Housing Development Options on the risk of flooding therefore largely depends on the location of development in conjunction with areas of flood risk and the extent to which the findings of the SFRA is considered and addressed, and the extent to which the Core Strategy encourages the use of measures to limit flood risk from fluvial flooding and flooding from surface water run off, as discussed in **section 3.2.18**.

SA Objective 5: Minimise the district's contribution to climate change

- 4.2.14 The Housing Development Options will to varying extents stimulate limitations or increases in greenhouse gas emissions at different locations.

- 4.2.15 Due to road transport's contribution to greenhouse gas emissions in the district, the options which have the potential to support climate change mitigation are those that will help reduce the need to travel. Housing Development Option A, which focuses a greater degree of residential development in and around Stratford-upon-Avon, will support a limitation of greenhouse gas emissions from transport by maximising accessibility from new areas of development to shops, facilities and services in the town, and supporting accessibility to high quality public transport networks in the town, including the rail network. Similarly, Housing Development Option B, which seeks to focus a greater degree of residential development in Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne, which are the locations outside of Stratford-upon-Avon with the broadest range of services and amenities, will also help limit greenhouse gas emissions from transport.
- 4.2.16 A wider distribution of new residential development in the Local Service Villages, as promoted by Options C and D, is less likely to concentrate development in the areas with good access to the full range of services, amenities and public transport networks. This has the potential to increase the need to travel and encourage car-based commuting, with implications for climate change mitigation
- 4.2.17 In terms of emissions from other sources, including notably housing, the distributional and spatial focus of the Housing Development Options do not enable the appraisal to determine to what extent energy efficient and low carbon development, or new renewable energy provision is included within new areas of residential development in the district. This will depend on the design of the thematic policies to be implemented through the Core Strategy.

SA Objective 6: Plan for the anticipated levels of climate change

- 4.2.18 The Core Strategy will play a key role in deciding how successfully Stratford-on-Avon adapts to the effects of climate change on the district.
- 4.2.19 The Housing Development Options provide four very high level distributional alternatives for new development. On aspects such as flooding, the urban heat island effect, landscape change, impacts on biodiversity and the other aspects linked to the likely effects of climate change on the district, the effect of each Housing Development Option will depend on the detailed location, layout and design of development. In particular the extent to which the Core Strategy encourages development which utilises design and layout which supports adaptation to climate change will be key to this SA Objective. This can include: new and enhanced green infrastructure provision, appropriate shading and planting, solar control, increased ventilation, improved drainage (and where appropriate, SuDS), green roofs, management of flood pathways, rain harvesting and storage, grey water recycling and a range of other approaches. In this context the design of the Housing Development Options, like the Initial Options do not provide sufficient detail to determine the extent to which development will support effective adaptation to the effects of climate change.
- 4.2.20 The aspects linked to climate change relevant to flooding have been discussed under SA Objective 4 above.

SA Objective 7: Protect and conserve natural resources

- 4.2.21 In terms of the reuse of previously developed and underutilised land in the district, the dispersed approach to new residential development promoted by all four Housing Development Options will help increase opportunities for development to take place on brownfield land. This is due to such an approach being more likely to enable new development to utilise the limited availability of such land in the district. All four Housing Development Options also seek to facilitate 10% of new housing development on rural brownfield sites.
- 4.2.22 The extent to which the Housing Development Options incorporate energy efficiency measures or utilise renewable energy provision will be influenced by the design of the thematic Core Strategy policies. Similarly, issues such as water efficiency measures, sustainable waste management or the utilisation of recycled and reused materials in new development will be addressed by the thematic Core Strategy policies. These issues will be considered later in the SA process through the assessment of draft Core Strategy policies.

SA Objective 8: Reduce air, soil and water pollution

Air Quality

- 4.2.23 Air quality issues in the district are focussed in Stratford-upon-Avon, Studley and Henley-on-Arden, as highlighted by the recent declaration of air quality management areas in these settlements. All three AQMAs designated in the district have been declared due to the fact that the areas in question have exceeded the annual mean objective for nitrogen dioxide, linked to emissions from transport.
- 4.2.24 The four Housing Development Options promote a dispersal approach to new housing in Stratford-on-Avon. In this context, overall, the contribution to air quality issues from increases in traffic flows may therefore in part be limited through establishing a broader distribution of new residential development; particularly when compared with alternative options which focus new growth areas at a limited number of locations in the district. The effect of the options will depend on the detailed location of new housing in terms of existing air quality issues, including the extent to which new development affects existing and potential air quality hotspots associated with the highways network.
- 4.2.25 A number of broad conclusions can be made about the four Housing Development Options. Housing Development Option A, through facilitating a greater degree of new residential development in and around Stratford-upon-Avon, has the potential to contribute to increases in traffic flows in the vicinity of the town. This will have implications for emissions from transport on routes with existing air quality issues. Similarly, air quality in Henley-in-Arden and Studley is most likely to be affected by Housing Development Option B, which seeks to locate an increased level of housing development in and on the edge of Main Rural Centres in the district.

- 4.2.26 Housing Development Options A and B, through focussing housing development in the key centres of the district, which are the settlements with the widest range of services, facilities, amenities and public transport links, may help limit air quality issues through reducing residents' need to travel to access services, amenities and public transport networks. This will, particularly in the longer term, help limit overall contributions from additional traffic linked to new residential development areas.
- 4.2.27 Promoting an increased spread of development throughout the district by pursuing Housing Development Options C and D is less likely to significantly contribute to issues at existing air quality hotspots. A broader spread of development across the district may increase car use as people seek to access services, facilities and amenities that require motorised access in order to reach them. This may have implications for air quality over a wider area through increasing the need to travel and encouraging car use.

Water and Soil Quality

- 4.2.28 In terms of water and soil quality (see **section 3.2.33**), the effect of the options is likely to depend on the extent to which the Core Strategy seeks to limit and reduce the release of diffuse and point source pollutants into soil and water receptor sites. Remediation of contaminated land, reducing 'unsatisfactory intermittent discharges' and improving the management of waste water are all factors which can have a bearing on water quality in rivers, lakes and aquifers. The Core Strategy should promote the use of high quality drainage systems in the district, including SuDS where appropriate. All four Housing Development Options seek to promote the same proportion of housing development on rural brownfield sites. This should help reduce impacts on soil quality and the soil resource that might otherwise occur at greenfield locations.

SA Objective 9: Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.

- 4.2.29 The provision of improved recycling facilities and the encouragement of sustainable waste management have not been addressed by the Housing Development Options at this stage in the plan making process. The considerations highlighted in **section 3.2.34** should therefore be taken into account. Carbon footprint implications associated with collection of domestic waste may be lower if new development is concentrated in particular locations as opposed to being spread more widely across the district.

SA Objective 10: Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.

- 4.2.30 As highlighted in **section 3.2.35**, a number of key sustainability issues are linked to transport and accessibility in the district. This includes congestion issues in and around Stratford-upon-Avon and a number of the other towns and villages in the district; poor accessibility to services, facilities and amenities from rural areas; high car dependency and access issues for those without access to a car; the need to mitigate the adverse impacts of traffic; and the effect of proposed residential, employment and retail growth on the district's transport networks.

- 4.2.31 Stratford-upon-Avon, as the primary settlement of the district, has the broadest range of services, facilities and amenities. It is also the centre of the north of the district's public transport networks, and is linked by rail to a range of destinations. In this context, Housing Development Option A, through focussing a greater degree of development in and around the town, is most likely to support accessibility from new development areas to services, facilities and opportunities, and reduce the need to travel. It is also most likely to encourage the use of public transport and walking and cycling networks. The focus of development on the town however may lead to adverse effects on traffic and congestion without significant improvements in public transport and walking and cycling infrastructure.
- 4.2.32 Housing Development Option B, though providing a focus of development on the larger towns and villages in the district is also likely to support this SA Objective. Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne are, outside of Stratford-upon-Avon, the locations with the largest concentration of services, facilities and amenities in the district. They also tend to be better connected by public transport networks than other locations in the district. For this reason, although to a likely lesser extent than Housing Development Option A, Housing Development Option B will limit the need to travel from new residential development areas and promote public transport use and walking and cycling.
- 4.2.33 Housing Development Options C and D, through spreading development around most towns and villages in the district, is less likely to support development which is focussed in the most accessible locations by walking and cycling or public transport. This is less likely to reduce the high car dependency in the district, or improve accessibility to services, facilities and amenities from rural areas, or limit the need to travel. Similarly it may increase the proportion of residents commuting significant distances by car for jobs and employment purposes. It should be noted though that the option may support the viability of existing services and facilities at some locations through stimulating an increase in population size at these locations through residential growth. This has the potential to limit the need to travel to such services for existing residents.

SA Objective 11: Reduce barriers for those living in rural areas

- 4.2.34 Housing Development Option A, through focussing a greater degree of residential development in Stratford-upon-Avon is less likely to support the vitality and viability of other towns and villages in the district. Due to the importance of district's smaller settlements for many, the option is less likely to improve accessibility to services, facilities and amenities for those living in rural areas who do not have access to a car.

- 4.2.35 Housing Development Option B, through focussing half of the proposed residential development in the district in Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne, will support this SA objective as the larger towns and villages of the district are important service centres for their rural hinterlands. In this context an increase in the settlements' population may improve the range of facilities available and the viability of the towns and villages as service centres. The effect of this option in relation to this SA Objective will however depend on the extent to which new development in the main settlements is accompanied by enhancements to service provision, and improvements to public transport networks from the Main Rural Centres' rural hinterlands.
- 4.2.36 Through promoting 20% and 30% of new residential development in Local Service Villages, Housing Development Options C and D are likely to support rural services and facilities at some locations by helping to promote the viability of smaller settlements in the district. In this context, the extent to which new development will support accessibility to local services from rural areas depends on the degree to which new housing provision is accompanied by new facilities and amenities in these smaller settlements.

SA Objective 12: Protect the integrity of the district's countryside

- 4.2.37 Each of the Housing Development Options promote a dispersed approach to development. The Housing Development Options are therefore less likely than a number of the Initial Options (**section 3.2.45**) to lead to large scale development on the edge of towns and villages on greenfield land.
- 4.2.38 In this context the options have less potential to lead to the loss of higher quality agricultural land, or lead to effects on landscape character and local distinctiveness. The options also have less potential to lead to the degradation of areas of land on the urban fringe which are earmarked for potential development if each option is progressed.
- 4.2.39 Overall, of the options, Housing Development Option A has the most potential to lead to the loss of greenfield land due to the option's concentration of 50% of the district's proposed residential development in and around Stratford-upon-Avon.

SA Objective 13: Provide affordable, environmentally sound and good quality housing for all

- 4.2.40 In terms of the delivery of housing in Stratford-on-Avon, the Core Strategy is likely to promote district-wide targets for affordable housing provision in conjunction with the aims of the district's Housing Strategy and Sustainable Community Strategy, and to reflect the findings of the Strategic Housing Market Assessment, Housing Provision Options Study and other studies which have been carried out for the district.
- 4.2.41 As highlighted by the findings of the Joint Housing Assessment for South Warwickshire 2006, nearly 80% of the total level of net unmet housing need in the district is located outside of the town of Stratford-upon-Avon. In this context, Housing Development Options B, C and D are more likely to help meet this need in the district than Option A, through promoting a higher degree of development in the Main Rural Centres and Local Service Villages.

- 4.2.42 Housing Development Options C and D, which promote a greater degree of development in the 38 Local Service Villages, will do more to help increase the supply of affordable housing in smaller rural communities. This will support this SA objective as in many of these settlements, there is a significant shortage of available affordable housing.
- 4.2.43 All options, including Housing Development A, seek to locate at least 50% of new housing development outside of Stratford-upon-Avon. Therefore all of the Housing Development Options, due to the dispersed nature of the options, will to a greater or lesser degree help deliver rural housing in the district.

SA Objective 14: Safeguard and improve community health, safety and well being

- 4.2.44 Due to the distributional and strategic nature of the Housing Development Options, a large factor determining the options' likely sustainability performance in relation to health and wellbeing is linked to residents' accessibility to health services and sports, leisure and recreational facilities. From this perspective, the options which are likely to facilitate ease of access to such amenities are likely to perform more favourably in relation to this objective.
- 4.2.45 Housing Development Options A and B will locate an increased degree (80%) of development at locations in the district with the broadest range of health, leisure and sports facilities, namely, Stratford-upon-Avon, Shipston-on-Stour, Henley-in-Arden, Studley, Bidford-on-Avon, Wellesbourne and Kineton. This will help support accessibility to these amenities.
- 4.2.46 The extent to which Housing Development Options C and D (which promote a higher degree of residential development in the Local Service Villages) promote accessibility to health services and sports, leisure and recreational facilities depends on the location of new development, and the extent to which new development has access to such services. It will also depend on the provision of new facilities and improved public transport provision to serve new areas of growth in these areas.
- 4.2.47 Another factor which will influence health and wellbeing in the district is the extent to which new development encourages healthier and more active lifestyles. In this context the options which will facilitate walking and cycling as viable alternatives to the private car will support health and wellbeing. Housing Development Options A and B will promote walking and cycling through focussing development at the locations with the largest concentration of services, facilities and amenities in the district and the most comprehensive public transport networks. The extent to which Housing Development Options C and D promote more active lifestyles will depend on the provision of new services and facilities within the Local Service Villages and (relevant to all of the Housing Development Options) the provision of accessible and useable open space as part of high quality local and district-wide green infrastructure networks.

SA Objective 15: Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.

- 4.2.48 The relatively dispersed nature of the four Housing Development Options is likely to support the economy of all categories of settlement in the district, through promoting residential development in the full range of towns and villages in Stratford-on-Avon.

- 4.2.49 Housing Development Option A will do most to support the economy of the largest town in the district by focussing a greater degree of residential growth in Stratford-upon-Avon. Housing Development Option B has, for the same reason, the largest potential to support the local economy of Shipston-on-Stour, Henley-in-Arden, Studley, Bidford-on-Avon, Wellesbourne and Kineton and promote local employment. Of the four options, Housing Development Option C and D, through respectively promoting 20% and 30% of new housing development to take place in the Local Service Villages, will do most to support the viability and vitality of smaller settlements in the district and promote the vitality of the rural economy.
- 4.2.50 The contribution of the Housing Development Options in supporting sustainable economic growth in the district will also depend on the extent to which existing, expanded and new employment sites are accessible from new residential areas by public transport provision and walking and cycling. Locating new residential provision in accessible areas will enable local people to benefit from new opportunities and support more sustainable patterns of growth. In this context Housing Development Options A and B will promote the development of new employment provision in the towns and villages where a wider range of services, facilities and amenities are present and more developed public transport networks are available.

4.3 Summary of the Appraisal of the Housing Development Options

- 4.3.1 Each of the Housing Development Options promotes a dispersed approach to development. The Housing Development Options are therefore less likely than a number of the Initial Options to lead to large scale development on the edge of towns and villages. This will help limit concentrated effects at specific locations on aspects such as landscape quality, the historic environment, biodiversity assets or the integrity of rural areas.
- 4.3.2 Housing Development Options A and B, which promote a greater degree of housing development in the larger settlements of the district, have the highest potential to promote the use of sustainable modes of transport, support accessibility from new housing development areas to a comprehensive range services, facilities and amenities and public transport networks, and limit greenhouse gas emissions. Housing Development Option A is however less likely to support the vitality of rural settlements or help meet housing needs outside of the main town of the district.
- 4.3.3 Housing Development Options C and D, by promoting a greater degree of housing development in the Local Service villages, will help meet established housing needs, including affordable housing in the smaller settlements of the district. It also has more potential to support the viability of services in Local Service Villages, support the rural economy and reduce barriers to those living in rural areas. Housing Development Option B will support accessibility to facilities and amenities from rural areas by supporting service provision in the Main Rural Centres, which are important centres for their rural hinterland.

- 4.3.4 It has been difficult to establish, in detail, the likely sustainability performance of each Housing Development Option due to their distributional nature. To present a more informed appraisal, locational details, including the design, layout and type of each development proposal are required. Improved infrastructure and service provision, to support new growth areas in the district, is another piece of the plan-making jigsaw which will enable the sustainability appraisal to report more fully. The thematic policies introduced for the Core Strategy will therefore be a key influence on the sustainability of new development taken forward for the district.

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5 Conclusions and Next Steps

5.1 Conclusions

- 5.1.1 This Part 1 Options SA Report has examined the potential sustainability effects of the six Initial Options and four Housing Development Options proposed for the district during the development of earlier versions of the Core Strategy 2007-2010.
- 5.1.2 Due to the high level strategic nature of the options, and their exclusively distributional characteristics, in many cases it has been difficult to establish in detail the likely sustainability performance of each option.
- 5.1.3 Despite the limitations surrounding the focus and detail of each option, it has been possible in most cases to establish which of the options are likely to perform more favourably or less favourably in relation to the 15 SA Objectives. The findings of the appraisal presented in **Chapters 3** and **4** should therefore be considered through the ongoing development of the preferred spatial options for the Core Strategy.

5.2 Next Steps

- 5.2.1 The assessment presented in this Part 1 Options SA Report sets out the first stage of the appraisal of reasonable alternatives for the Stratford-on-Avon Core Strategy. The second stage of the appraisal of reasonable alternatives will assess a number of further options for the district, linked to three scenarios which are likely to relate to: current population trends; an economic growth scenario; and a reduction in growth. It will also examine the Housing Requirement Options considered in the Housing Provision Options Study.
- 5.2.2 The findings of the second stage of the appraisal will be presented in a Part 2 Options SA Report, which will be prepared when housing and employment scenarios have been developed in detail. In addition to setting out the findings of the assessment, the Part 2 Options SA Report will also draw on the Part 1 Options Report and present a series of recommendations to be considered through the ongoing development the Core Strategy.
- 5.2.3 It is anticipated that this process will help inform and influence the development of the preferred approach for the Core Strategy. In this context the findings and recommendations of the appraisal of reasonable alternatives should be considered during the ongoing development of the Core Strategy, including linked to potential locations for strategic allocations, and the design of district-wide policies to guide growth in Stratford-on-Avon.
- 5.2.4 Following the completion of the current stage of the SA process, the appraisal of reasonable alternatives, the SA team will assess in detail successive versions of the policies and proposals to be included in the Core Strategy. This will include appraisals of the thematic policies designed to guide new development in the district.

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6 References

CLG (2008) *Planning Policy Statement 12: Local Spatial Planning*. Available at:
<http://www.communities.gov.uk/publications/planningandbuilding/pps12lsp>

CLG (2009a) *Sustainability Appraisal Guidance*. Available at:
<http://www.pas.gov.uk/pas/core/page.do?pageId=152450>

CLG (2009b) *Planning Policy Statement 9: Biodiversity and Geological Conservation*. Available at:
<http://www.communities.gov.uk/publications/planningandbuilding/pps9>

DEFRA (2010) *Municipal Waste Statistics*. Available at:
<http://archive.defra.gov.uk/evidence/statistics/environment/wastats/bulletin10.htm>

Environment Agency (2007) *Summer 2007 Flood Key Facts*. Available at:
[http://www.warwickshire.gov.uk/Web/corporate/pages.nsf/Links/2CCEECB3DF671CB9802575EF0033B573/\\$file/Warwickshire.pdf](http://www.warwickshire.gov.uk/Web/corporate/pages.nsf/Links/2CCEECB3DF671CB9802575EF0033B573/$file/Warwickshire.pdf)

European Commission (2011) *Strategic Environmental Assessment: SEA Directive 2001/42/EC*. Available at:
<http://ec.europa.eu/environment/eia/sea-legalcontext.htm>

GL Hearn (2011) *Housing Provision Options Study*. Available at:
<http://www.stratford.gov.uk/planning/planning-3812.cfm>

Halcrow (2008) *Stratford-on-Avon District Council Strategic Flood Risk Assessment for Local Development Framework Level 1*. Available at:
<http://www.stratford.gov.uk/files/seealsodocs/8649/Stratford%2Don%2DAvon%20Level%201%20SFRA%20%2D%20January%202008.PDF>

HM Government (2006) *Natural Environment and Rural Communities Act*. Available at:
<http://www.legislation.gov.uk/ukpga/2006/16/contents>

HM Government (2011) *Natural Environment White Paper*. Available at: <http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf>

Stratford-on-Avon District Council and Warwickshire District Council (2006) *Joint Housing Assessment for South Warwickshire*. Available at:
<http://www.stratford.gov.uk/files/seealsodocs/6864/Housing%20Markets%20of%20South%20Warkwickshire%20%2D%20Final%20report%20August%202006.pdf>

Stratford-on-Avon District Council (2008a) *Local Development Framework Draft Core Strategy*. Available at:
<http://www.stratford.gov.uk/files/seealsodocs/9049/Draft%20Core%20Strategy%20%2D%20October%20008.pdf>

Stratford-on-Avon District Council (2008b) *Stratford-on-Avon District Local Development Framework Meeting Housing Needs Supplementary Planning Document*. Available at:
<http://www.stratford.gov.uk/files/seealsodocs/8751/Meeting%20Housing%20Needs%20-%20Consultation%20Statement.pdf>

Stratford-on-Avon District Council (2010) *Consultation Core Strategy 2010*. Available at:
<http://www.stratford.gov.uk/planning/core-strategy-2010.cfm>

UK Climate Impacts Programme 09 (2009) *UK Climate Projections*. Available at:
<http://ukclimateprojections.defra.gov.uk/content/view/515/499/>

West Midlands Regional Assembly (2009) *West Midlands Regional Spatial Strategy Phase Two Revision. Report to the Panel*. Available at: <http://www.wmra.gov.uk/documents/wmrssphase2panelreport.pdf>

Appendix A: Stratford-on-Avon Core Strategy SA Framework

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Stratford-on-Avon Core Strategy SA Framework

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
1	Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	Q1a	Will it preserve buildings of architectural or historic interest and, where necessary, encourage their conservation and renewal?	Number of Grade I and Grade II* buildings at risk.	None (English Heritage)
				Number of Grade II and locally listed buildings at risk.	None (English Heritage)
		Q1b	Will it preserve or enhance archaeological sites/remains?	Proportion of scheduled monuments at risk from damage, decay or loss	None (English Heritage)
				Number/proportion of development proposals informed by archaeological provisions, including surveys	All (English Heritage)
		Q1c	Will it improve and broaden access to, understanding, and enjoyment of the historic environment?	Annual number of visitors to historic attractions	
Q1d	Will it preserve or enhance the setting of cultural heritage assets?	Proportion of conservation areas covered by up-to-date appraisals (less than five years old) and published management plans.			
2	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities.	Q2a	Will it safeguard and enhance the character of the landscape and local distinctiveness and identity?	Application of detailed characterisation studies to new development	
		Q2b	Will it safeguard and enhance the character of the townscape and local distinctiveness and identity?	Application of detailed characterisation studies to new development	
		Q2c	Will it preserve or enhance the setting of cultural heritage assets?	Proportion of conservation areas covered by up-to-date appraisals (less than five years old) and published management plans.	
		Q2d	Will it help limit noise pollution?	Tranquillity assessments	
		Q2e	Will it help limit light pollution?	Tranquillity assessments	
		Q2f	Will it encourage well-designed, high quality developments that enhance the built and natural environment?	% development meeting Building for Life standards.	

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
3	Protect, enhance and manage biodiversity and geodiversity.	Q3a	Will it lead to a loss of or damage to biodiversity interest?	Extent (and condition) of priority habitats	
				Extent of priority species	
				Area and condition of nationally designated sites in appropriate management	By 2010, to ensure that 95% of SSSIs are in favourable or recovering condition (target to directly reflect the national PSA target)
		Q3b	Will it lead to habitat creation, matching BAP priorities?	Area of Nature Conservation designation per 1,000 population (ha).	At least 1ha of Local Nature Reserve per 1,000 population (Natural England)
				Area of new habitat creation reflecting Warwickshire, Coventry and Solihull BAP priorities	
				Extent and condition of key habitats for which Biodiversity Action Plans (BAPs) have been established	
		Q3c	Will it maintain and enhance sites nationally designated for their biodiversity interest and increase their area?	Number, area and condition of nationally designated sites in appropriate management	
		Q3d	Will it increase the area of sites designated for their geodiversity interest?	Area designated for geological interest	
		Q3e	Will it maintain and enhance sites designated for their geodiversity interest?	Condition of geological SSSIs	By 2010, to ensure that 95% of SSSIs are in favourable or recovering condition (target to directly reflect the national PSA target)
		Q3f	Will it link up areas of fragmented habitat?	Extent (and condition) of priority habitats	
		Q3g	Will it increase awareness of biodiversity and geodiversity assets?	Number of school trips to Stratford-on-Avon's Nature Reserves	
	Number of accessibility improvements to nature reserves and local sites (including geodiversity sites)				
	Number of interpretation improvements (including information boards etc) in nature reserves and local sites				

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
4	Reduce the risk of flooding.	Q4a	Will it help prevent flood risk present in the district from fluvial flooding?	Amount of new development (ha) situated within a 1:100 flood risk area (Flood Zone 3), including an allowance for climate change	Zero (Environment agency)
		Q4b	Will it help prevent flood risk present in the district from surface water flooding?	Number of properties at risk of flooding	
				No. of planning permissions incorporating SUDS	All (Environment agency)
		Q4c	Will it help limit potential increases in flood risk likely to take place in the district as a result of climate change?	Number of planning permissions granted contrary to the advice of the Environment Agency on flood defence grounds	Zero (Environment agency)
5	Minimise the district's contribution to climate change.	Q5a	Will it help reduce Stratford-on-Avon's carbon footprint?	Proportion of electricity produced from renewable resources	UK Government renewable energy target: 15% of electricity to be produced from renewable sources by 2020.
				Proportion of new homes achieving a four star or above sustainability rating for the "Energy/CO ₂ " category as stipulated by the Code for Sustainable Homes	All new homes to be carbon neutral by 2016 (DCLG target)
				Per capita greenhouse gas emissions	
				Emission by source	
				Percentage of people aged 16-74 who usually travel to work by driving a car or van	
				CO ₂ , methane and nitrous oxide emissions per sector	UK Government targets: 80% reduction of carbon dioxide emission by 2050 and a 26% to 32% reduction by 2020
		Q5b	Will it help raise awareness of climate change mitigation?	Number of initiatives to increase awareness of energy efficiency	
6	Plan for the anticipated levels of climate change.	Q6a	Will it help limit potential increases in flood risk likely to take place in the district as a result of climate change?	Amount of new development (ha) situated within a 1:100 flood risk area, including an allowance for climate change	Zero (Environment agency)
				Number of planning permissions granted contrary to the advice of the Environment Agency on flood defence grounds	Zero (Environment agency)

SA Objective		Decision making criteria: Will the option/proposal...		Indicators	Targets
				Number of properties at risk of flooding.	
		Q6b	Will it encourage the development of buildings prepared for the impacts of climate change?	% of developments meeting the minimum standards for the "Surface Water Run-Off" and "Surface Water Management" categories in the Code for Sustainable Homes	
				Thermal efficiency of new and retro fitted development; % planning permissions for projects designed with passive solar design, building orientation, natural ventilation	
				Proportion of new homes meeting Level 4 of the CSH water category.	
				No. of planning permissions incorporating green roofs	
				No. of planning permissions incorporating SUDS	All (Environment agency)
				Q6c	Will it retain existing green infrastructure and promote the expansion of green infrastructure to help facilitate climate change adaptation?
7	Protect and conserve natural resources.	Q7a	Will it include measures to limit water consumption?	Average domestic water consumption (l/head/day)	
		Q7b	Will it safeguard the district's minerals resources for future use?	Area of land with potential for minerals use sterilised	
		Q7c	Will it utilise derelict, degraded and under-used land?	% of dwellings built on previously developed land	
				Previously developed land that has been vacant or derelict for more than five years	
Q7d	Will it lead to the more efficient use of land?	Housing density in new development: average number of dwellings per hectare			

SA Objective		Decision making criteria: Will the option/proposal...		Indicators	Targets
		Q7e	Will it lead to reduced consumption of materials and resources?	Percentage of commercial buildings meeting BREEAM Very Good Standard or above or equivalent	
				Percentage of housing developments achieving a four star or above sustainability rating as stipulated by the Code for Sustainable Homes	
		Q7f	Will it lead to the loss of the best and most versatile agricultural land?	Area of Grades 1, 2 and 3a agricultural land lost to new development	
8	Reduce air, soil and water pollution.	Q8a	Will it lead to improved water quality of both surface water groundwater features?	% of watercourses classified as good or very good biological and chemical quality	All inland water bodies to reach at least "good status" by 2015 (Water Framework Directive)
				% change in pollution incidents	
				No. of planning permissions incorporating SUDS	All (Environment agency)
		Q8b	Will it lead to improved air quality?	Number and area of Air Quality Management Areas	To meet national Air Quality Standards
				No. of days when air pollution is moderate or high for NO ₂ , SO ₂ , O ₃ , CO or PM ₁₀	To meet national Air Quality Standards
		Q8c	Will it maintain and enhance soil quality?	Area of contaminated land (ha)	
				% of projects (by number and value) involving remediation of any kind	
		Q8d	Will it reduce the overall amount of diffuse pollution to air, water and soil?	% change in pollution incidents	

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
9	Reduce waste generation and disposal, and promote the waste hierarchy of reduce, reuse, recycle/compost, energy recovery and disposal.	Q9a	Will it provide facilities for the separation and recycling of waste?	Type and capacity of waste management facilities	
				Household waste (a) arisings and (b) recycled or composted	
		Q9b	Will it encourage the use of recycled materials in construction?	Reuse of recycled materials from former building stock and other sources	
10	Improve the efficiency of transport networks by increasing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	Q10a	Will it reduce the need to travel?	Percentage of completed significant local service developments located within a defined centre	
				Average distance (km) travelled to fixed place of work	
				Percentage of new residential development within 30 minutes public transport time of a GP, hospital, primary and secondary school, employment and major health centre.	
				Percentage of residents surveyed finding it easy to access key local services.	
		Q10b	Will it encourage walking and cycling?	Percentage of people aged 16-74 who usually travel to work by bicycle or on foot	
				Proportion of new development providing cycle parking.	
		Q10c	Will it reduce car use?	Percentage of people aged 16-74 who usually travel to work by driving a car or van	
		Q10d	Will it encourage use of public transport?	Percentage of people aged 16-74 who usually travel to work by bus or train	
				Number of journeys made by bus per annum	
				Percentage of development in urban/rural areas within 400m or 5 minutes walk of half hourly bus service	
				Number of journeys made by train per annum	

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
		Q10e	Will it provide adequate means of access by a range of sustainable transport modes?	Distance of new development to existing or proposed public transport routes. Provision of new walking and cycling links to accompany new development	
		Q10f	Will it help limit HGV traffic flows?	HGV traffic flows	
11	Reduce barriers for those living in rural areas	Q11a	Will it increase provision of local services and facilities and reduce centralisation?	Percentage of residents surveyed finding it easy to access key local services	
		Q11a	Will it improve accessibility by a range of transport modes to services and facilities from rural areas?	Percentage of rural households within 800m of an hourly or better bus service	
		Q11a	Will it support the provision of affordable housing in rural areas?	Affordable housing completions in rural areas	
12	Protect the integrity of the district's countryside.	Q12a	Will it prevent the degradation of land on the urban fringe?	Area of derelict or underutilised land on the urban fringe	
		Q12b	Will it lead to a loss of agricultural land?	Area of agricultural land not in use or under active management.	
		Q12c	Will it safeguard local distinctiveness and identity?	Application of detailed characterisation studies to new development	
13	Provide affordable, environmentally sound and good quality housing for all.	Q13a	Will it ensure all groups have access to decent, appropriate and affordable housing?	Affordable housing completions	
		Q13b	Will it identify an appropriate supply of land for new housing?	Net additional dwellings for the current year.	
		Q13c	Will it ensure that all new development contributes to local distinctiveness and improve the local environment?	Number of major housing applications refused on design grounds. Accessible Natural Greenspace	100% of population with Accessible Natural Greenspace of at least 2ha within 300m (or 5 minutes of their home (Natural England) SDC targets for open space are currently being developed.

SA Objective		Decision making criteria: Will the option/proposal...		Indicators	Targets
		Q13d	Will it meet the building specification guidance in the Code for Sustainable Homes? (DCLG)	Percentage of housing developments achieving a four star or above sustainability rating as stipulated by the Code for Sustainable Homes	All new homes to be carbon neutral by 2016 (UK Government target)
		Q13e	Will it reduce the number of households on the Housing Register?	Number of households on the Housing Register	To reduce the numbers of homeless households in priority need and the number of households in housing need on the housing register
14	Safeguard and improve community health, safety and well being.	Q14a	Will it improve access for all to health, leisure and recreational facilities?	Travel time by public transport to nearest health centre and sports facility.	
		Q14b	Will it improve and enhance the district's green infrastructure network?	Area of parks and green spaces per 1,000 head of population	SDC open space standards are currently being developed.
				Accessible Natural Greenspace	100% of population with Accessible Natural Greenspace of at least 2ha within 300m (or 5 minutes of their home (Natural England) SDC standards are currently being developed.
				Area of playing fields and sports pitches.	2.83 hectares per 1,000 population for playing field provision (National Playing Fields Association Standard) SDC open space standards are currently being developed.
				Amount of land needed to rectify deficiencies in Open Space Standards (ha)	
				Percentage of eligible open spaces managed to green flag award standard	
				Percentage of residents that are satisfied with the quantity/quality of open space	
Q14c	Will it improve long term health?	Life expectancy at birth			

	SA Objective	Decision making criteria: Will the option/proposal...	Indicators	Targets
			Standardised mortality rates	
		Q14d Will it ensure that risks to human health and the environment from contamination are identified and removed?	Area of contaminated land (ha)	
		Q14e Will it encourage healthy and active lifestyles?	% of adults (16+) participating in at least 30 minutes of moderate intensity sport and active recreation (including recreational walking) on three or more days of the week The number of sports pitches available to the public per 1,000 population	To increase participation by 1% year-on-year until 2020 to achieve target of 50% of population participants in 30 mins activity, three times a week by 2020 (The Framework for Sport in England)
		Q14f Will it reduce obesity?	Percentage of adult population classified as obese	By 2010, stabilise incidences of obesity in children by 2010 (DoH)
		Q14g Does it consider the needs of the district's growing elderly population?	Percentage of older people being supported intensively to live at home	Increasing the proportion of older people being supported to live in their own home by 1% annually (DoH PSA)
		Q14h Will it enable communities to influence the decisions that affect their neighbourhoods and quality of life?	Percentage of adults surveyed who feel they can influence decisions affecting their own local area	
		Q14i Will it improve the satisfaction of people with their neighbourhoods as a place to live?	% respondents very or fairly satisfied with their neighbourhood	
		Q14j Will it reduce crime and the fear of crime?	Indices of Multiple Deprivation: Crime domain	
		Q14k Will it reduce deprivation in the district?	Indices of Multiple Deprivation	
		Q14l Will it improve road safety?	Number of people killed or seriously injured on the roads per year	

	SA Objective	Decision making criteria: Will the option/proposal...		Indicators	Targets
15	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.	Q15a	Will it ensure that new employment, office, retail and leisure developments are in locations that are accessible to those who will use them by a choice of transport modes?	Proportion of residential development within 30 minutes public transport time of key services	
		Q15b	Will it help ensure an adequate supply of employment land?	Ha of new employment land provision	
		Q15c	Will it support or encourage new business sectors?	No. of start-up businesses in the environmental and social enterprise sector	
				Expenditure on R&D as the proportion of GVA	
		Q15d	Will it support the visitor economy?	Visitor numbers	



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