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ASSOCIATES

Sustainability Appraisal of the Stratford-on-Avon Core Strategy

Part 3 Housing Development Options SA Report

January 2012

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Sustainability Appraisal of the Stratford-on-Avon Core Strategy

Part 3 Housing Development Options SA Report

Client:	Stratford-on-Avon District Council
Report No.:	LC-0005_Stratford_SA_Options_Part_3_5_211112DKF
Status:	Final Report
Date:	January 2012
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Abbreviations

AQMA	Air Quality Management Area
CLG	Department of Communities and Local Government
CO_2	Carbon dioxide
DPD	Development Plan Document
LDF	Local Development Framework
HRA	Habitats Regulations Assessment
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
WCC	Warwickshire County Council

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Executive Summary

Introduction

This executive summary presents the main findings of the Sustainability Appraisal of the six Housing Development Options in the Core Strategy for the district. SDC are seeking to provide 8000 new dwellings during the period 2008-2028. 5,600 dwellings will be provided through the LDF. Option A focuses development in Stratford-upon-Avon, B in the Main Rural Centres, C proposes moderate dispersal, D extensive dispersal, E focuses on Rural Settlements and F proposes wider dispersal. For further details on the options see **Table 1.4**.

The six Housing Requirement Options are assessed against all fifteen SA Objectives and the conclusions are stated with a brief explanation. For further clarification please see **Chapter 3**.

SA Objective 1 (Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance)

Designated historic and cultural heritage are spread throughout the district, thus all the options have the potential to cause adverse impacts on sites, features and areas of historical importance. The effects of the options largely depend on the location of new residential development. Careful design and layout of development will need to be promoted in order to protect and enhance features of the historic and cultural environment.

SA Objective 2 (Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities)

All six housing options will involve trade-offs in an effort to preserve existing landscapes and townscapes whilst trying to mitigate potential effects associated with growth and development. All options are assessed as uncertain.

SA Objective 3 (Protect, enhance and manage biodiversity and geodiversity)

The district has numerous sites of national and local importance. The effect of housing on the districts biodiversity and geodiversity resources will depend upon the location, layout, and design of new development. It should be noted that all options have relative merits in terms of positive and negative impacts on biodiversity. The integration of GI will have a significant role in supporting biodiversity within the district. It is difficult to accurately predict how biodiversity and geodiversity resources will be affecting by each of the housing options at a strategic level; therefore all options were assessed as uncertain.

SA Objective 4 (Reduce the risk of flooding)

Each of the housing options has the potential to lead to development in flood risk areas. If appropriate and effective flood risk management is not promoted within development all options could exacerbate surface water flood risk and fluvial flood risk. The options are all assessed as uncertain as reducing the risk of flooding depends on the design and layout of new development.

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

Each Housing Development Option will, to a varying extent, lead to limitations or increases in greenhouse gas emissions at different locations. Road transport is the largest contributor to greenhouse gas emissions in the district. Those options with the potential to mitigate climate change are those that support and facilitate reducing the need to travel and promote sustainable modes of transport.

Option A has the greatest potential to support sustainable travel. Stratford-upon-Avon has a broad range of shops, services and facilities that could all be accessed by new development within the town. This broad range of accessible services facilitates shorter journeys limiting the length of time cars may be used. In addition, the relative closeness of services coupled with support for walking and strategic cycle routes may encourage more people to utilise public transport and/or non-motorised modes of travel. Increasing the dispersion of development (Options E and F) could facilitate an increase in the need to travel and cause a rise in the proportion of car use and increase the volume of greenhouse gas emissions from the transport sector.

SA Objective 6 (Plan for the anticipated levels of climate change)

The six Housing Development Options provide a variation in distribution of new development. Adapting to climate change and responding to aspects such as flooding, the urban heat island affect, landscape changes and impacts on biodiversity will depend on the size, location, layout and design of new residential development. The housing options do not provide sufficient detail to determine the extent to which option will support the most effective adaptation to climate change.

SA Objective 7 (Protect and conserve natural resources)

Each Housing Development Option has the potential to impact upon the natural resources of the district. This is largely dependent on the size, location and design of future development. Option A has the greatest potential to support re-use of previously developed and under-utilised land within Stratford-upon-Avon. Option B, through a greater concentration of development would promote efficient use of available space and encourage the re-use of land in the main rural centres. Options C, D, E and F with an increasing degree of spatial distribution would be better placed to take advantage of under-utilised land within smaller settlements and rural areas.

All housing options have the potential to impact on agricultural land if development magnitude is greater than the volume of previously developed land. . In broad terms Options E and F have the greatest potential to impact agricultural land of grade three qualities and so are assessed as uncertain.

SA Objective 8 (Reduce air, soil and water pollution)

It is uncertain as to the implications of the housing options in relation to this SA objective. Potential impacts would be dependent on site location, design and extent. Impacts on water quality will depend on the location of development and the extent to which there will be capacity at relevant wastewater treatment works. In terms of soil pollution, potential impacts are dependent on site location.

Options A and B seek to direct the largest proportion of development towards Stratford-upon-Avon and the main rural centres. This has the greatest potential to exacerbate existing ait quality issues

within Stratford-upon-Avon, Henley-in-Arden and Studley. Options C, D, E and F seek to promote wider dispersal of development. These have the greatest potential to disperse potential air quality issues.

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

It is uncertain as to the implications of the housing options in relation to this SA objective. The extent to which development encourages sustainable waste management will be dependent on Core Strategy Policies as well as development design and layout. In addition, behavioural characteristics and access to recycling facilities will be important.

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)

Options A and B have the most potential to positively support this SA objective. Directing development towards areas with the broadest range of services is more likely to facilitate a reduction in the need to travel and an adoption of sustainable modes of transport.

Options E and F, and to a lesser extent C and D are more likely to support the need to travel and use of the car. Alternatively directing development to the wider district may help facilitate transport improvements in these areas. However, this will depend on the extent to which services, facilities, and transport improvements are encouraged and accompany development.

SA Objective 11 (Reduce barriers for those living in rural areas)

All options promote a degree of dispersal and are therefore have some potential to help reduce rural barriers. Options C, and D, and more so, E and F are likely to support this SA objective. Promoting development within the wider district is more likely to support the vitality and viability of rural services and facilities. These options are more likely to encourage an enhancement in provision of new services within rural locations.

Options A and B are less likely to support the vitality and viability of rural services as they focus a larger magnitude of development towards the main rural centres and Stratford-upon-Avon. These options will support centralisation.

SA Objective 12 (Protect the integrity of the district's countryside)

Options A and B perform negatively in relation to this SA objective. These options will aid the protection of the settlement fringes and distinctiveness of smaller settlements in the district but are more likely to adversely affect the main rural centres and Stratford-upon-Avon. Options A and B direct a larger magnitude of development towards fewer locations. These options are more likely to require greenfield land.

Uncertainty exists in relation to Options C, D, E and F. The extent of the impacts on the integrity of the district's countryside largely depends on the location and design of residential development. The main

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issues surrounding this SA objective is the order of magnitude and scale of importance in relation to other SA objectives.

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

All housing options promote a degree of housing dispersal thus each have the opportunity to support this SA Objective. All housing options are likely to support environmentally sound homes in conjunction with the code for sustainable homes.

The Joint Housing Needs Assessment for south Warwickshire (2006) suggests nearly 80% of the total level of net unmet housing need in the Stratford-on-Avon district is located outside of the town of Stratford-upon-Avon. In this context Option A is less likely to support this SA objective. Option B is relatively a better option, however, together both Options A and B support 80% of housing within Stratford-upon-Avon and the main rural centres. Options C and D are an improvement upon Options A and B but Options E and F are best placed to support this SA objective through wider dispersal of housing developments.

SA Objective 14 (Safeguard and improve community health, safety and wellbeing)

Options A and B perform positively against this SA objective as they seek to direct the largest proportion of housing development to areas with the broadest range of services and facilities. Options C, D, E and F direct housing away from the areas with the broadest range of services and facilities. It is uncertain as to the impact of these options as potential impacts are dependent on existing facilities and the extent to which development is accompanied by new healthcare facilities and enhanced accessibility.

Health and wellbeing is influenced and dependant on various factors such as wealth, behaviour and lifestyles, thus housing options alone will not necessarily lead to improvements.

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

The extent to which a dynamic and diverse economy is developed and maintained will depend on policies within the Core Strategy and the skills profile of local residents more so than the location of housing. Each Housing Development Option has the opportunity to support the local economies of all settlement categories by promoting residential development across the district and within a range of settlement sizes.

Option A and B are likely to support the economies of Stratford-on-Avon and the main rural centres. Options C and D, and to a greater extent E and F will contribute most to supporting the vitality and viability of services and facilities in the wider district. These options are more likely to support the decentralisation of services and maintenance of the rural economy of the wider district.

Conclusions

This is a sustainability appraisal report concerning six housing options. Each option describes the distribution of new residential development throughout Stratford-on-Avon but does not provide further

detail in terms of exact location within each settlement. Using the information available, the SA process has sought to determine the different effects associated with each option.

In terms of presenting an overall performance evaluation for each option, a simple summation of scores would be an unfair and improper means of presenting the findings. The individual performance of each option against each SA Objective is a more representative means of considering the results. On this basis, options D, E and F perform adversely on more occasions than options A, B or C. Options E and F are the only options which have been assessed as strongly adverse against one SA Objective. It should be noted that lack of detail in the options has led to uncertainty of conclusion in the case of some objectives.

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1   Introduction

1.1   Purpose of this Report

1.1.1   UE Associates on behalf of Stratford-on-Avon District Council (SDC) are conducting the Sustainability Appraisal (SA) of the Core Strategy for the district. SA is the process of informing and influencing the Core Strategy to maximise the sustainability value of the plan.

1.1.2   This is the third and final assessment of Housing Development Options (2011). It is part of a series of sustainability appraisals that have considered housing options in 2010 and 2011. This report follows the release of Part 1 (October, 2011) and Part 2 (November, 2011).

1.2   The SA Process

1.1.3   The appraisal of reasonable alternatives for the Core Strategy follows scoping. This Part 3 Options SA Report together with Part 1 (October, 2011) and Part 2 (November, 2011) follows the release of an SA Scoping Report to the consultation authorities in May 2011. The consultation authorities comprise of English Heritage, Environment Agency and Natural England. 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.

1.1.4   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.

1.1.5   The SEA Directive requires the plan making process identifies '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)). UK Government guidance advises that the SA and SEA processes are undertaken on an integrated basis.

1.1.6   The preparation of options to inform the Stratford-on-Avon Core Strategy has taken place over a period of approximately two years. This report documents the final assessment of alternatives relating to housing development options.

1.3   The Part 1 SA Housing Options Report

1.1.7   The Part 1 SA Housing Options Report assessed six Initial Housing Options (2008) and four subsequent housing options (2010). This report was published in October 2011. These options were previously considered through earlier versions of the Core Strategy in 2008. The options sought to distribute housing across the district at a range of locations.

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

1.1.9   The Initial Options informed the development of the first draft of the Core Strategy, which was published in October 2008.   A summary of the initial options (2008) is presented in **Table 1.1**.

Table 1.1: Initial Options (2008) assessed through the Part 1 appraisal

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

1.1.10   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.

1.1.11   To reflect the changes to housing provision put forward by the RSS Phase Two Revision, a further set of Housing Development Options was 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.

1.1.12   The Housing Development Options, which were presented in the February 2010 Consultation Core Strategy, are presented in **Table 1.2**.

Table 1.2: *Housing Development Options (2010) assessed through the Part 1 appraisal*

Location	Housing Development Options			
	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%

1.1.13   The SA of the six initial options (2008) and four Housing development (2010) options forms Part 1 of the assessment of reasonable alternatives. The Part 1 SA report can be viewed via the following link:

http://www.stratford.gov.uk/planning/planning-3794.cfm

1.4   The Part 2 SA Housing Options Report

1.1.14   This Part 2 SA Housing Options Report assessed three housing options based on housing requirement projections. In June 2011, GLHearn prepared a Housing Options Study for SDC. The Study assesses housing need and demand in Stratford-on-Avon. It takes into account population and economic dynamics, and considers land availability and strategic infrastructure constraints. These inputs led to the formation of options for housing provision in the district.

1.1.15   Three Housing Requirement Options were put forward by the Study, which present different levels of housing provision in the district to 2028. The three options identified through the Housing Requirements Study are presented in **Table 1.3**.

Table1.3: *Housing Requirement Options (GLHearn 2011) assessed through the Part 2 appraisal*

Housing Requirement Options	
Option 1: Main Trend-Based Projection	Based on continuation of long-term migration trends, but a reduction in migration of 15% on short-term migration trends (2004-9). Delivery of 10,300 homes is required over the 20 year plan period (515 per annum). This is marginally above average rates of development in the district between 2000-2010 (480 per annum) but broadly consistent with development rates in the pre-recession period.

Option 2: Economic Led Projection	Based on expected employment growth across Warwickshire and a continuation of existing commuting patterns where there is some net in commuting to Stratford-on-Avon District to work. It assumes that the labour market performs in relative terms quite strongly through the recession. Delivery of 13,000 homes is required over the 20 year plan period (650 per annum).
Option 3: 25% Reduction in In-migration	Represents planning for a 25% reduction in net migration relative to long-term migration trends (1999-2009). Delivery of 8,200 dwellings is required over the 20 year plan period (410 per annum).

1.1.16   The appraisal of these options forms Part 2 of the assessment of reasonable alternatives and was published in November 2011 (UE Associates, 2011). The Part 2 report is available on the Stratford-on-Avon District Council's website via the following link:

http://www.stratford.gov.uk/planning/planning-3794.cfm

1.5   The Part 3 SA Housing Options Report

1.1.17   The assessment presented in this Part 3 Housing Development Options SA report appraises the options for distributing the amount of housing development SDC seek to provide for in their Core Strategy. SDC are seeking to provide 8000 new dwellings during the period 2008-2028. As of April 2011, approximately 2,400 of these dwellings have been accounted for as either having been built, under construction, have planning permission or have been identified by the SHLAA without having planning permission (SDC, 2011). This leaves a further 5,600 dwellings to be provided through the LDF.

1.1.18   In October 2011 SDC identified options for meeting the housing requirement for the district. The identified options are similar to the housing options presented in the February 2010 Consultation Core Strategy. The options put forward in October 2011 include additional options (Options E and F) relating to housing distribution. There are six Housing Development Options, each with a different strategic spatial approach for distributing housing development across the district.

1.1.19   This report follows best practice guidance and seeks to conform to the intensions of the CLG SA Guidance (CLG, 2009) and PPS12 (CLG, 2008). In this context, the Part 3 options report presents sustainability issues for consideration alongside proposed options for the Core Strategy.

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Table 1.4: Housing Development Options (2011) assessed through this Part 3 appraisal

Location	Housing Development Options					
	A: **Focus on Stratford-upon-Avon**	**B:** **Focus on Main Rural Centres**	**C:** **Moderate Dispersal**	**D:** **Extensive Dispersal**	**E:** **Focus on Rural Settlements**	**F:** **Wider Dispersal**
Stratford-upon-Avon	50% (2,800)	30% (1,680)	35% (1,960)	30% (1,680)	15% (840)	10% (560)
Main Rural Centres	30% (1,680)	50% (2,800)	35% (1,960)	30% (1,680)	20% (1,120)	30% (1680)
Villages	10% (560)	10% (560)	20% (1,120)	30% (1,680)	55% (3,080)	50% (2,800)
Rural Brownfield Sites	10% (560)	10% (560)	10% (560)	10% (560)	10% (560)	10% (560)

1.6 How to use this Document

1.1.20 This Part 3 Options report should be considered alongside the Part 1 and Part 2 Options SA reports to provide sustainability context. It should be noted that this is not 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.

1.1.21 The Part 3 Options SA Report is structured as follows:

Chapter 2 and **Appendix A** sets out the methodology for the assessment of the six Housing Development Options including the SA Framework.

Chapter 3 presents the findings of the appraisal of the Housing Development Options, drawing on the assessment of Housing Development Options appraised through the Part 1 SA report. This is presented through an assessment matrix, commentary and accompanying summary which compares the sustainability performance of each of the options in relation to the SA objectives developed during scoping.

Chapter 4 provides concluding comments relating to the assessment and supportive commentary.

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2   Assessment Methodology

2.1   Introduction

2.1.1   This chapter sets out the appraisal methodology used to assess the Housing Development Options for 2011. This chapter also discusses how the findings of the appraisal have been presented to inform the evolution of the Core Strategy.

2.2   Assessment of Housing Development Options 2011

2.2.1   As discussed in **section 1.5,** in October 2011 SDC published a revision of the Housing Development Options which were assessed through Part 1 and included two additional options; in total six Housing Development Options have been put forward for assessment. These options are presented in **Table 2.1**.

Table 2.1: Housing Development Options (2011) assessed through this Part 3 appraisal

Location	Housing Development Options					
	A: **Focus on Stratford-upon-Avon**	**B:** **Focus on Main Rural Centres**	**C:** **Moderate Dispersal**	**D:** **Extensive Dispersal**	**E:** **Focus on Rural Settlements**	**F:** **Wider Dispersal**
Stratford-upon-Avon	50% (2,800)	30% (1,680)	35% (1,960)	30% (1,680)	15% (840)	10% (560)
Main Rural Centres: Alcester Bidford-on-Avon Henley-in-Arden Kineton Shipston-on-Stour Southam Studley Wellesbourne	30% (1,680)	50% (2,800)	35% (1,960)	30% (1,680)	20% (1,120)	30% (1680)
Villages	10% (560)	10% (560)	20% (1,120)	30% (1,680)	55% (3,080)	50% (2,800)
Rural Brownfield Sites	10% (560)	10% (560)	10% (560)	10% (560)	10% (560)	10% (560)

2.2.2   Included in **Table 2.1** are the four broad locations for development distribution. The table illustrates the proportion of housing numbers that would be directed towards each broad development location associated with each of the six Housing Development Options.

2.2.3   The assessment of the Housing Development Options has engaged a strategic level assessment technique which uses the SA Framework (see **Appendix A**) the SA evidence baseline (Scoping Report, 2011) and the review of plans, programmes and policies to assess each alternative option. Findings of the appraisal are presented in matrix format and are accompanied by a commentary on and summary of identified sustainability issues.

2.2.4   The Housing Development Options have been appraised against the SA Framework objectives (see **Table 2.2** and **Appendix A**) and draw on the key issues (see **Appendix B**) identified through the Scoping Report (see **Appendix B**).   **Table 2.2** demonstrates how the themes explored during scoping have been used and relate to the SA Framework objectives.

2.2.5   Through this approach the appraisal has evaluated the likely sustainability performance of the Housing Development Options against each of the fifteen SA objectives.

Table 2.2: SA Objectives (UE Associates, 2011)

SA Objective		Relevance to sustainability theme identified through scoping (May 2011)
1	Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	Historic environment.
2	Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities.	Landscape, historic environment.
3	Protect, enhance and manage biodiversity and geodiversity.	Biodiversity and geodiversity.
4	Reduce the risk of flooding.	Water, climate change.
5	Minimise the district's contribution to climate change.	Climate change.
6	Plan for the anticipated levels of climate change.	Climate change, water.
7	Protect and conserve natural resources.	Material assets, soil, water.
8	Reduce air, soil and water pollution.	Air, soil, water.
9	Reduce waste generation and disposal, and achieve the sustainable management of waste.	Material assets.
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.	Accessibility and transport, population and quality of life.
11	Reduce barriers for those living in rural areas.	Accessibility and transport, population and quality of life.

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SA Objective		Relevance to sustainability theme identified through scoping (May 2011)
12	Protect the integrity of the district's countryside.	Population and quality of life, landscape, historic environment, soil, economic factors.
13	Provide affordable, environmentally sound and good quality housing for all.	Housing, population and quality of life.
14	Safeguard and improve community health, safety and wellbeing.	Population and quality of life
15	Develop a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities.	Economic factors

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3   Appraisal of the Housing Development Options

3.1   Strategic Assessment of the Housing Development Options

3.1.1   **Table 3.1** presents an appraisal matrix summarising the assessment carried out on the Housing Development Options put forward by SDC. This is accompanied by a commentary discussing and comparing the sustainability performance of each option in relation to the SA objectives. The following sections provide a commentary of the sustainability performance of each of the six Housing Development Options.

3.1.2   To support the commentary each SA objective draws upon the key issue/issues that were identified through the scoping report (see **Appendix B**), which ultimately led to the development of the SA objective (see **Appendix A**). This enables the integration of key issues into the SA process to inform the appraisal of the options.

Table 3.1: Summary of the assessment of the Housing Development Options (2011)

	SA Objective	Housing Development Options					
		A	B	C	D	E	F
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.	+/-	+/-	+/-	+/-	+/-	+/-

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	SA Objective	Housing Development Options					
		A	B	C	D	E	F
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 wellbeing.	++	++	+/-	+/-	+/-	+/-
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, Spatial Approach Options:	
Option A	Focus on Stratford-on-Avon
Option B	Focus on the main rural centres
Option C	Moderate dispersal
Option D	Extensive Dispersal
Option E	Focus on rural settlements
Option F	Wider Dispersal

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3.2   SA Objective 1: Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance

3.2.1   Each Housing Development Option has a degree of dispersal contained within the options. i.e. no individual settlement is the focus of an extreme proposed housing number. The maximum number of housing an individual settlement would need to accommodate would be Stratford-upon-Avon at 50% of 5,600 through Option A.

3.2.2   The relative dispersal of housing prompted by the six options will to some degree limit more focused effects on the historic environment of an individual settlement.   Designated historic and cultural heritage are spread throughout the district, thus all the options have the potential to cause impacts. The effects of the options largely depend on the location of new residential development.   The careful design and layout of development will need to be promoted in order to protect and enhance features of the historic and cultural environment.

3.2.3   Through Option A, focusing 50% of new development in and around Stratford-on-Avon, has the most potential to affect the integrity of the town's historic and cultural heritage resource. Options B, C, D, E and F will have less of an effect on Stratford-upon-Avon by suggesting less concentrated development with 30%, 35%, 30%, 15% and 10% respectively. However, the effects are dependent on the location of development. As shown if **Figure 3.1**, development which is directed to the north-west and south-west of Stratford-upon-Avon is less likely to affect the historic setting of the town as opposed to development directed to West Shottery or more importantly the riverside.

ENVIRONMENTAL PLANNING
POLICY | DESIGN | PRACTICE
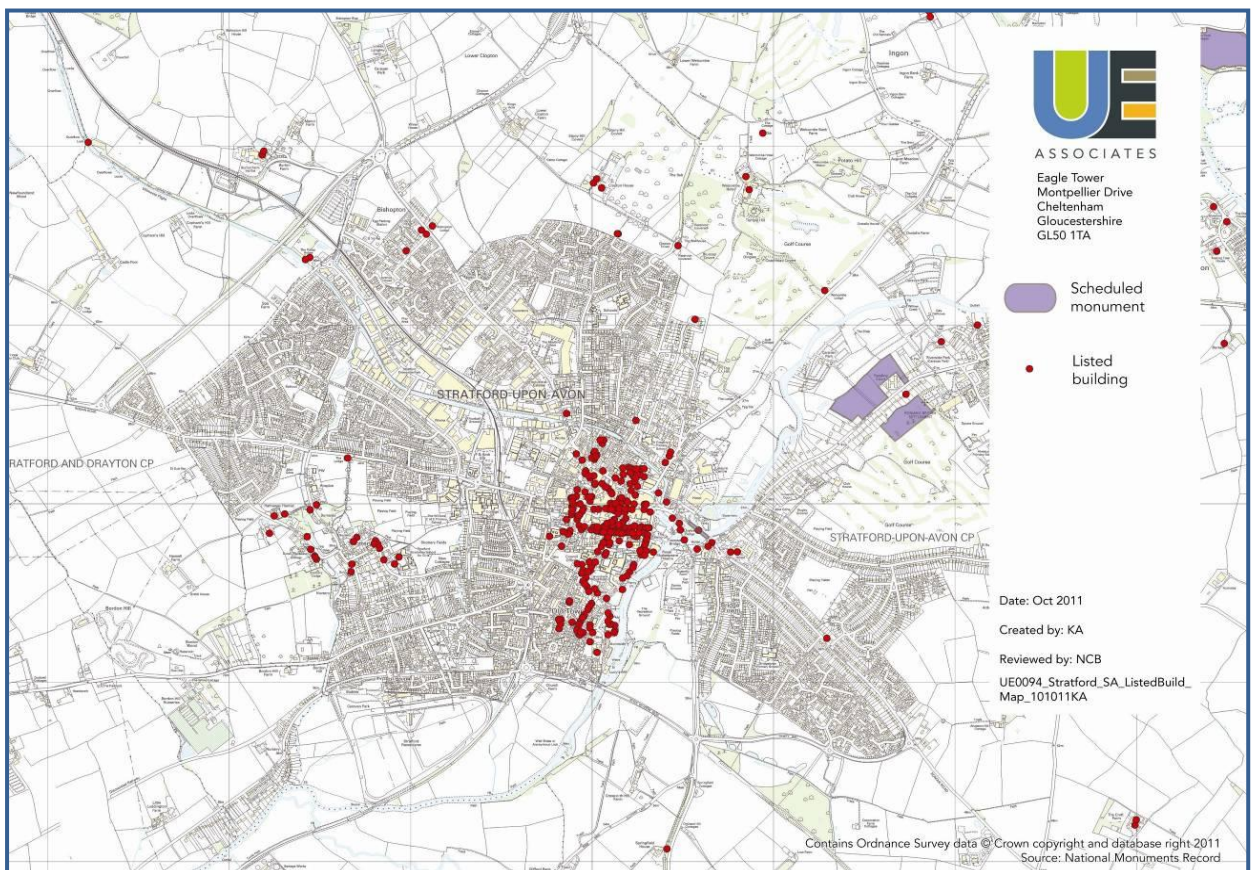
Figure 3.1: Scheduled monuments and listed buildings in Stratford-upon-Avon (Source UE Associates, 2011)

3.2.4   Whilst focusing housing development towards Stratford-upon-Avon has the most potential to impact the historic character and features of the town, Option A does have the most potential to protect historic environment features in other towns and villages.   Over 70 of the district's 76 conservation areas are located outside of Stratford-upon-Avon. Many of the districts heritage and cultural assets are dispersed throughout the district, illustrated by **Figure 3.2.**

3.2.5   Housing Development Option B has the most potential to affect historic and archaeological features 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 cultural value reflected by the presence of conservation areas and listed building located in each of the settlements. In addition, the Historic Environmental Assessment (WCC, 2008) revealed the main rural centres have a rich archaeological resource and the potential for undiscovered archaeological deposits. Promoting Housing Option B has the most potential to affect these archaeological deposits and features.
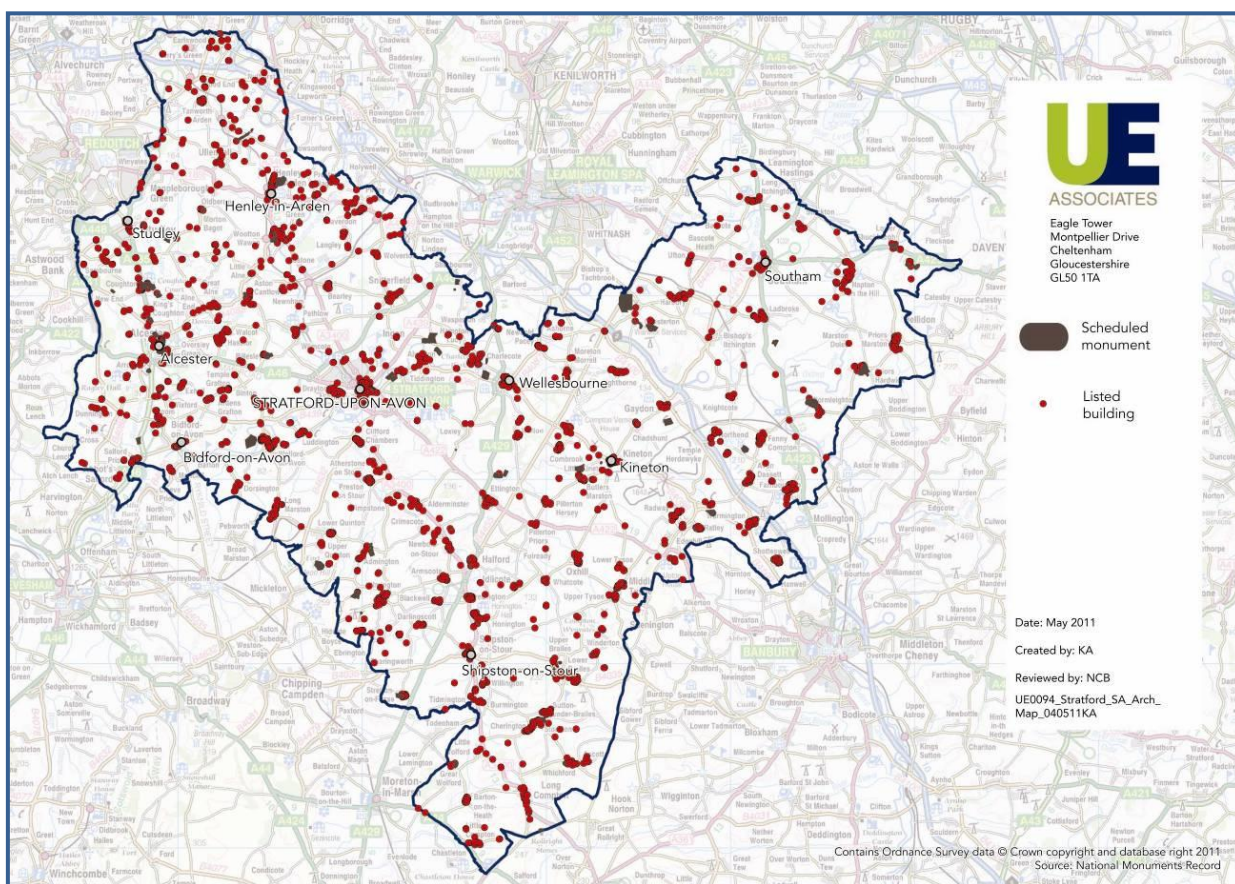
Figure 3.2: Distribution of Scheduled monuments and listed buildings throughout Stratford-on-Avon (Source UE Associates, 2011)

3.2.6   Options C and D are less likely to affect the historic and cultural heritage of Stratford-on-Avon and the main rural centres compared to Options A and B. The greater dispersal characteristic attributed to Options C, and D will reduce the concentration of potential effects on individual settlements through reduced housing numbers. This is achieved through dispersing a proportion of housing towards rural areas by 20%, and 30% respectively. However, the volumetric proportion of proposed housing is still at a level which would be likely to have more concentrated effects than Options E and F.

3.2.7   Options E and F have the greatest potential to affect historic and cultural features in rural areas. However, these options will encourage the greatest dispersal of housing throughout the district. These Options, by directing development to the 38 local service villages have the greatest potential to limit concentrated effects on historic features within individual settlements by limiting the scale of developments. These options will direct development throughout the settlement hierarchy of Stratford-on-Avon thus reducing the pressures of volumetric capacity associated through focusing development on particular settlements. This could also increase the ease in which potential effects are mitigated.

3.2.8   All options promote the same level of development towards rural brownfield sites. All options will likely lead to similar impacts upon the historic and cultural heritage. Depending on the specific location of development at rural brownfield sites, all options have the potential to impact seen and unseen archaeological and historic deposits and features where they exist.

3.3   SA Objective 2: Protect, enhance and manage the character and appearance of the landscape and townscape, maintaining and strengthening distinctiveness and its special qualities

3.3.1   Option A has the most potential to preserve the appearance, character and landscape of the wider district and rural centres. By concentrating 50% of housing development towards Stratford-upon-Avon this will reduce the need for development to occur within smaller settlements in the district. Option A would have a lesser affect in terms of light and noise pollution within the wider district.

3.3.2   However, Option A has the greatest potential to impact on the character and townscape of Stratford-upon-Avon by concentrating a larger proportion of development on one settlement. This Option will increase the pressure to expand the town, impacting in the internationally important distinctiveness of Stratford-upon-Avon. The Landscape Sensitivity Study (White Consultants, 2011) concluded that much of Stratford-upon-Avon has a high and high/medium sensitivity to housing development.

3.3.3   **Figure 3.3** illustrates that areas located to the east and west of Stratford-upon-Avon are less sensitive to housing development. The proposed volumetric capacity of housing associated with Option A (2,800) could prove a challenge in terms of allocating sites when considered in combination with other environmental constraints.

3.3.4   Concentrating a larger volume of housing within one settlement is likely to increase the difficulty of preserving the townscape and distinctiveness of the town. Option A encourages larger scale developments in order to meet directed development which could impact the ability to effectively mitigate affects to the townscape and landscapes of the urban fringe.
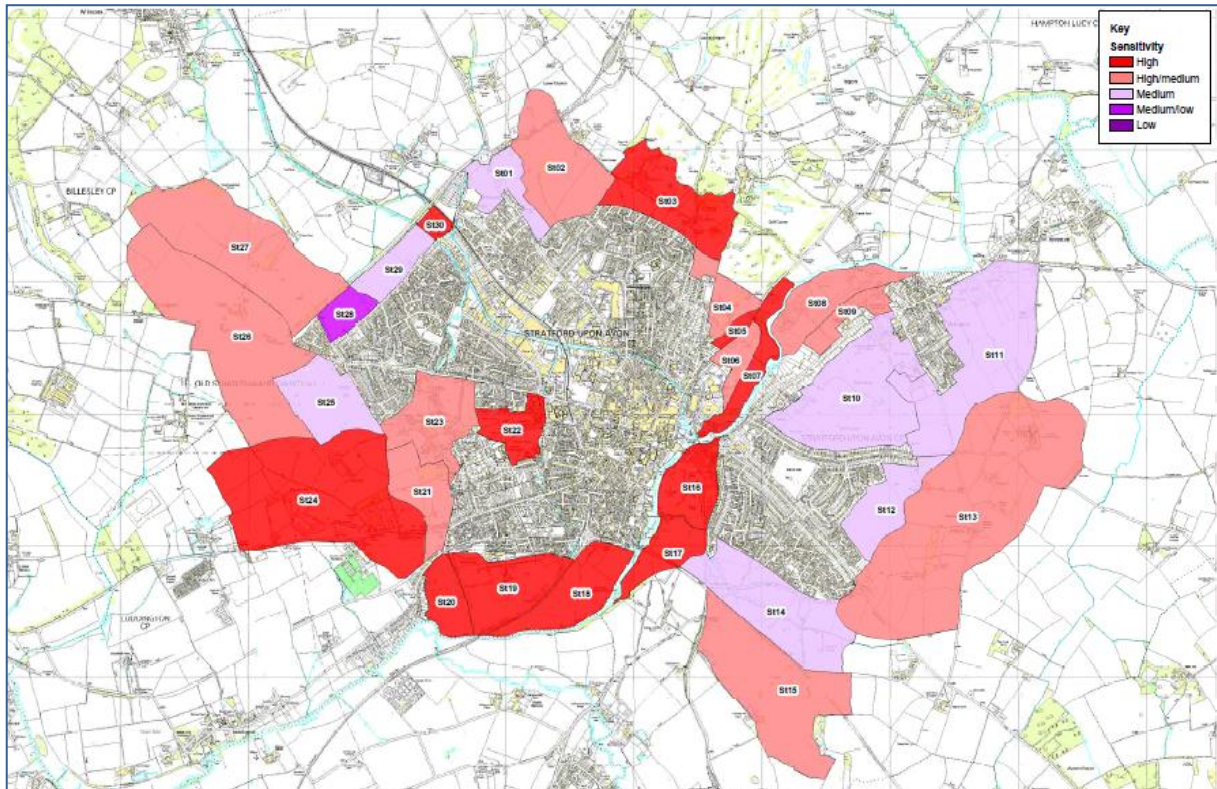
Figure 3.3: Landscape Sensitivity to Housing in Stratford-on-Avon (Source Whites Consultants, 2011).

3.3.5   Option B has a lesser likelihood of impacting the distinctiveness of Stratford-upon-Avon but the most potential to impact the rural distinctiveness and special qualities of the main rural centres. It is uncertain as to the extent to which this option will affect the main rural centres but the Landscape Sensitivity Assessment (White consultants, 2011) suggests many of the areas surrounding the settlements have a high to high/medium sensitivity to housing development. The assessment concludes that some locations may benefit from a landscape perspective by housing development which improves the urban edge of parts of the settlements. However, it is difficult to ascertain the volumetric capacity that could be tolerated.

3.3.6   Options C and D are less likely to affect the townscape and landscapes of Stratford-upon-Avon and the main rural centres compared to Options A and B. The dispersed approach associated with Option C and D will remove pressures from the main rural centres and Stratford-upon-Avon by directing a greater proportion of development towards rural areas, 20% and 30% respectively.

3.3.7   Options E and F have the greatest potential to preserve the distinctiveness and character of Stratford-upon-Avon and the main rural centres by significantly reducing the concentration of development away from individual settlements. The dispersed nature of Options E and F will reduce the need for larger scale developments thus increasing the ease to which effects can be mitigated.

3.3.8   Options E and F have the greatest potential to affect the rural qualities and distinctiveness of the wider district. It is uncertain as to the magnitude of potential effects as housing location and site characteristics have yet to be investigated and a thorough evidence base gathered. The housing approaches of both Options E and F have the potential to facilitate subtle long term impacts on the landscape and distinctiveness of rural settlements and overall landscape qualities.

3.3.9   The strategic direction of Options E and F may encourage business and other social and built infrastructures to follow housing development. Whilst these options direct pressures away from Stratford-upon-Avon, it could over a long period of time erode the distinctiveness of many smaller settlements and gradually alter the landscape characteristic of the district.

3.3.10 All six housing options will involve trade-offs in an effort to preserve existing landscapes and townscapes whilst trying to mitigate potential effects associated with growth and development.

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

3.4.1   The Stratford-on-Avon Green Infrastructure (GI) Study (UE Associates, 2011) highlights the diverse and rich mosaic of habitats and features of biodiversity and geodiversity importance. The district has numerous sites of international, national, and local importance. The effect of housing on the districts biodiversity and geodiversity resources will depend upon the location, layout, and design of new development. The integration of GI will have a significant role in supporting biodiversity within the district.

3.4.2   It is difficult to accurately predict how biodiversity and geodiversity resources will be affecting by each of the housing options at a strategic level. Despite this difficultly the following broad assumptions/conclusions can be made.

3.4.3   Option A has an increased potential to impact brownfield and greenfield sites in and around Stratford-upon-Avon, including more sensitive areas such as the Welcombe Hills and river corridor areas. Pressures for recreation and access to openspace may increase disturbance and degradation of habitats and features within and on the edge of the town.

3.4.4   The Ecological and Geological Assessment (HBAP, 2010) depicts the habitats found on the edge of Stratford-upon-Avon. These include a combination of semi-improved grassland, amenity grassland, arable farmland and improved grassland to name a few. This variety of habitats supports a range of species and includes habitats that support county rare plants and multiple protected species.

3.4.5   Option A could lead to the loss or damage of areas of ecological significance that are not covered by local or national designation. The greater concentration of housing through this option could result in larger development sizes being promoted, which could affect ecological assets outside of the town, such as BAP priority habitat.

3.4.6   However, concentrating development in Stratford would limit the concentration within the wider countryside. This would help limit the recreational pressures that may occur if development were to be directed to the wider countryside. In addition development may be able to provide funding for the management and maintenance of biodiversity features within the town through the Community Infrastructure Levy.

3.4.7   Option B has the greatest potential to affect the biodiversity features found within and around the main rural centres of Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne. The Ecological and Geological Assessment (HBAP, 2010) identifies the broad habitat types around these settlements, such as traditional orchards, semi-improved neutral grassland, and broadleaved woodland, and comments on the ecological condition and value of the habitats associated with each settlement. The study concludes that from an ecological perspective each main rural settlement has important areas for biodiversity and sensitive areas need to be preserved. Focusing development on the main rural centres may restrict the ability for these areas to be effectively preserved and managed.

3.4.8   Using developer contributions there is potential for development focused in the main rural centres to be enhanced and ecological networks to be supported through recommendations made in the GI Study.

3.4.9   Options C and D would have less of an effect on important brownfield and greenfield biodiversity assets compared with Options A and B. The dispersal characteristics of the options would enable development to occur across the district at smaller concentrations.

3.4.10   Options E and F have an increased potential to effect a wider range of biodiversity and geodiversity features as opposed to Options A and B, and a lesser extent C and D. Focusing development within the wider countryside will put more people in contact with a wider range of features. This could lead to increases in pressures on assets that are not properly managed leading to degradation. These options would spread development in the wider countryside which would allow for smaller development sizes. If required, this could potentially allow for more effective mitigation measures and limit the magnitude of impacts on biodiversity assets within rural settlement.

3.4.11   Option E and F have the opportunity to limit the impact of development on sensitive and important features found within Stratford-upon-Avon and the main rural centres. In addition, it may result in a reduction in pressures to develop brownfield sites in the main urban centres which have a high biodiversity value. A wider dispersal approach offered by Options E and F have the potential to bring more people in close proximity to features of biodiversity and geodiversity significance, which could lead to more appropriate management and maintenance as an important resource for local communities. All options direct 10% of housing towards rural brownfield sites, thus all options could lead to effects on brownfield biodiversity.

3.4.12   It should be noted that all options have relative merits in terms of positive and negative impacts on biodiversity. The integration of Green Infrastructure into development will form an important role in supporting biodiversity and mitigating any negative effects.

3.5   SA Objective 4: Reduce the risk of flooding

3.5.1   As highlighted by the GI Study (UE Associates, 2011) the Stratford-on-Avon district has a historical fluvial flood risk with flooding being a major issue for many of the districts settlements. Surface water flooding is another major issue for the district which has contributed to major flooding events, notably the flood events of July 2007. Flood risk zones across the Stratford-on-Avon district are shown in **Figure 3.4**.
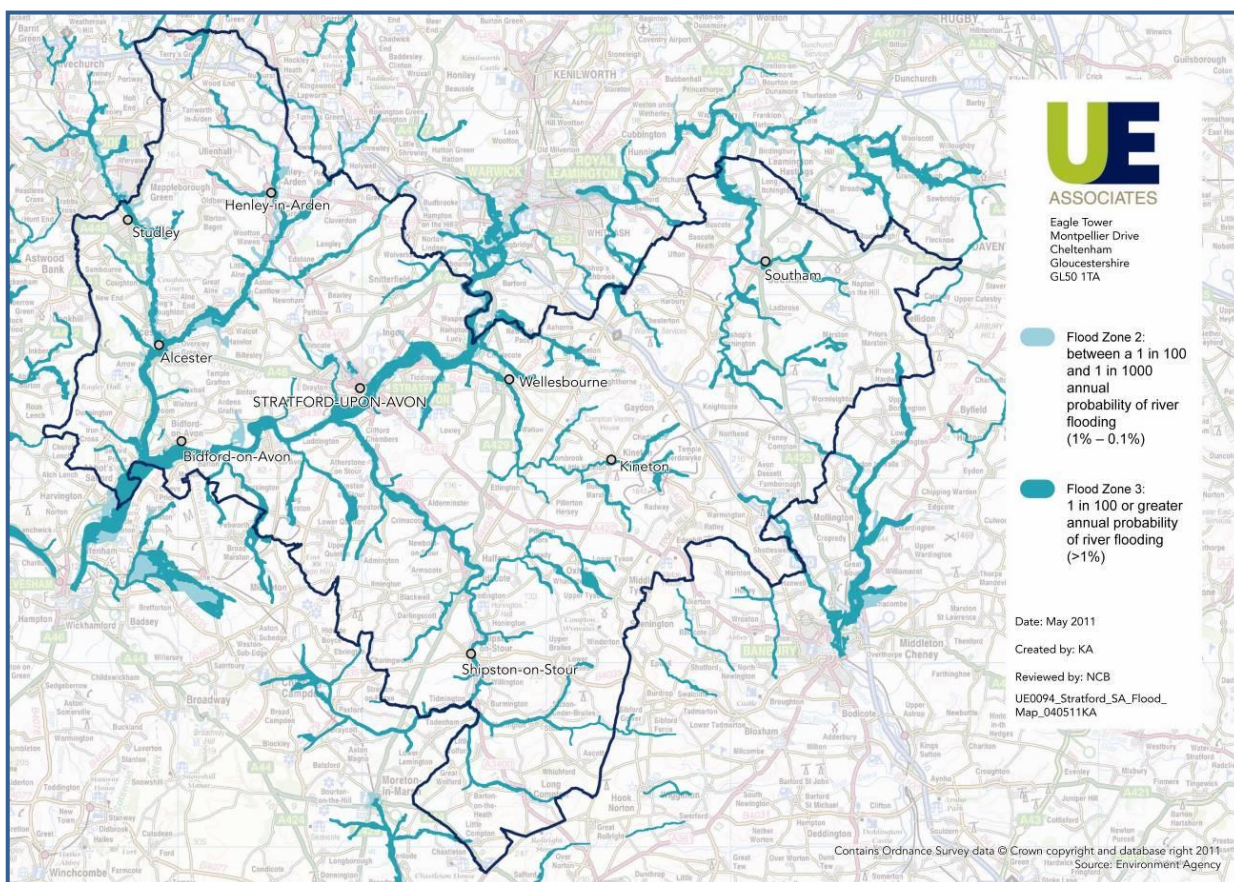
Figure 3.4: Flood risk across the Stratford-on-Avon district (Source UE Associates, 2011)

3.5.2   Each of the housing options has the potential to lead to development in flood risk areas. Each option could exacerbate surface water flood risk and fluvial flood risk if appropriate and effective flood risk management were not promoted within development.

3.5.3   In the context of flood risk, Option A may lead to greater flood risk within Stratford-upon-Avon whilst Option B has the potential to lead to increased flood risk within the main rural centres. Options C, D, E, and F have more implications for flood risk in the main service villages.

3.5.4   The effect of housing development on flood risk largely depends on the location of development in conjunction with areas of flood risk. Other factors include the extent to which the findings of the SFRA are considered and addressed, and the extent to which water management measures to limit flood risk such as SuDs are appropriate for an area.

3.5.5   In broad terms there may be a restricted scope for large scale flood alleviation works to be undertaken within Stratford-upon-Avon through Option A. There could be greater flexibility in flood risk management measures through option C, D, E and F.

3.5.6   In terms of surface water flood risk each housing option through the use of green infrastructure and on site sustainable water management techniques could reduce the risk of flooding. Options E and F may encourage smaller development sizes compared to Options A and B. Development promoted through Options E and F may have limited resources to accomplish larger scale flood management schemes which would have settlement wide benefits.

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

3.6.1   Each Housing Development Option will, to a varying extent, lead to limitations or increases in greenhouse gas emissions at different locations. Table 3.1, reproduced from the Stratford-on-Avon Core Strategy SA Scoping Report (UE Associates, 2011), shows that transport contributes around 45% of total CO_2 emissions for the Stratford-on-Avon district.

Table 3.2: Emissions in Stratford-on-Avon by source 2005-2008 (kilotonnes CO_2 and percentage) reproduced from UE Associates, 2011)

	Industry and commercial	Domestic	Land use change and forestry	Road Transport	Total
2005	336	318	38	587	1280
	26%	25%	3%	46%	
2006	346	326	37	582	1291
	27%	25%	3%	45%	
2007	333	318	38	594	1282
	26%	25%	3%	46%	
2008	325	316	39	556	1235
	26%	26%	3%	45%	

3.6.2   Road transport is the largest contributor to greenhouse gas emissions in the district. Those options with the potential to mitigate climate change are those that support and facilitate reducing the need to travel and promote sustainable modes of transport.

3.6.3   Option A has the greatest potential to support sustainable travel. Stratford-upon-Avon has a broad range of shops, services and facilities that could all be accessed by new development within the town. This broad range of accessible services facilitates shorter journeys limiting the length of time cars may be used. In addition, the relative closeness of services coupled with support for walking and strategic cycle routes may encourage more people to utilise public transport and/or non-motorised modes of travel.

3.6.4   Similarly Option B, by focusing on the main rural centres, has a broad range of services, facilities, and amenities.   This option will also help limit greenhouse gas emissions from transport. The main rural centres also have a relatively good public transport routes which may reduce car dependency.

3.6.5   A wider distribution of development associated with Options E and F is less likely to concentrate housing development in areas with access to a full range of amenities and facilities and serviced by a high quality public transport network. Options E and F have the potential to facilitate an increase in the need to travel causing a rise in the proportion of car use and increase the volume of greenhouse gas emissions from the transport sector.

3.6.6   In the long term, growth within the countryside may lead to improvements in public transport infrastructure. This could reduce reliance on private car use synonymous rural areas and the wider countryside.

3.6.7   In terms of emissions from other sources, notably housing, the distributional nature of each of the housing options do not enable the appraisal to determine the extent to which energy efficiency 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 policies that are to be implemented.

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

3.7.1   The six Housing Development Options provide a variation of high level alternatives to new development distribution. Adapting to climate change and responding to aspects such as flooding, the urban heat island affect, landscape changes and impacts on biodiversity will depend on the size, location, layout and design of new residential development. It is difficult to determine the effects in relation to climate change that each of the housing options is likely to have.

3.7.2   The Core Strategy will play a vital role in determining how successful Stratford-on-Avon will be in adapting to the effects of climate change. The extent to which the Core Strategy encourages development to utilise measures that support the adaptation to climate change will be key. The Core Strategy could achieve this by encouraging enhanced green infrastructure provision that maximises connectivity and promotes adaptive features.   Other measures include encouraging greater tree planting for shading, green roofs, building orientation considerations to improve natural ventilation, improved drainage through the use of SuDs, grey water recycling, and water efficiency measures.

3.7.3   The Core Strategy should ensure it does not encourage adaptive measures that would contribute to an increase in greenhouse gas emissions. Measures could include encouraging building design that promotes natural ventilation as this could reduce the need for air conditioning.

3.7.4   The housing options do not provide sufficient detail to determine the extent to which development will support effective adaptation to climate change. The following points offer an insight into possible impacts the housing development options may have in terms of adapting to climate change.

3.7.5   In the event of extreme weather, Option A and B through promoting development focusing on Stratford-on-Avon and the main rural centres may be able to respond more effectively. In the event of snow and blizzards the concentration of housing development within areas with the broadest range of services and facilities would enable people to be able to access these services without the use of a car. Through Options E and F, a focus on rural areas may contribute to rural isolation in the event that transport routes become impassable. On the other hand, in the long term by focusing development to rural areas may lead to improvements in rural transport routes and ultimately reduce rural isolationism.

3.7.6   Concentrating development in the Stratford-upon-Avon and the main rural centres through Options A and B may contribute to an urban heat island effect. Dispersing development throughout the district may reduce the likelihood of this occurring.

3.8   SA Objective 7: Protect and conserve natural resources

3.8.1   Each Housing Development Option has the potential to impact upon the natural resources of the district. This is largely dependent on the size, location and design of future development.

3.8.2   In terms of the re-use of previously developed and under-utilised land in the district, the relative dispersal approach to new residential development promoted by each of the options will to some degree increase the opportunity for development to take place on urban and rural brownfield sites. This is due to such an approach being more likely to enable the new development to utilise the limited availability of such land in the district.

3.8.3   Option A has the greatest potential to support re-use of previously developed and under-utilised land within Stratford-upon-Avon.   The greater concentration of development magnitude, compared to Options C, D, E and F, coupled with other spatial and environmental constraints would increase the likelihood of land being used more efficiently.   This may lead to location and design innovation with a focus on previously developed land.

3.8.4   Option B, through a greater concentration of development would promote efficient use of available space and encourage the re-use of land in the main rural centres. Options C, D, E and F with an increasing degree of spatial distribution would be better placed to take advantage of under-utilised land within smaller settlements and rural areas.

3.8.5   All housing options have the potential to impact on agricultural land if development magnitude is greater than the volume of previously developed land. **Figure 3.5** shows that the majority of the district is covered by grade three agricultural lands with a concentration of grade two agricultural lands located from the centre to the west of the district. In this respect each of the housing options has the potential to impact on the quality of agricultural land. In broad terms Options E and F have the greatest potential to impact agricultural land of grade three qualities. At this stage it is unclear what extent of the agricultural land is of grade 3a or 3b standard.
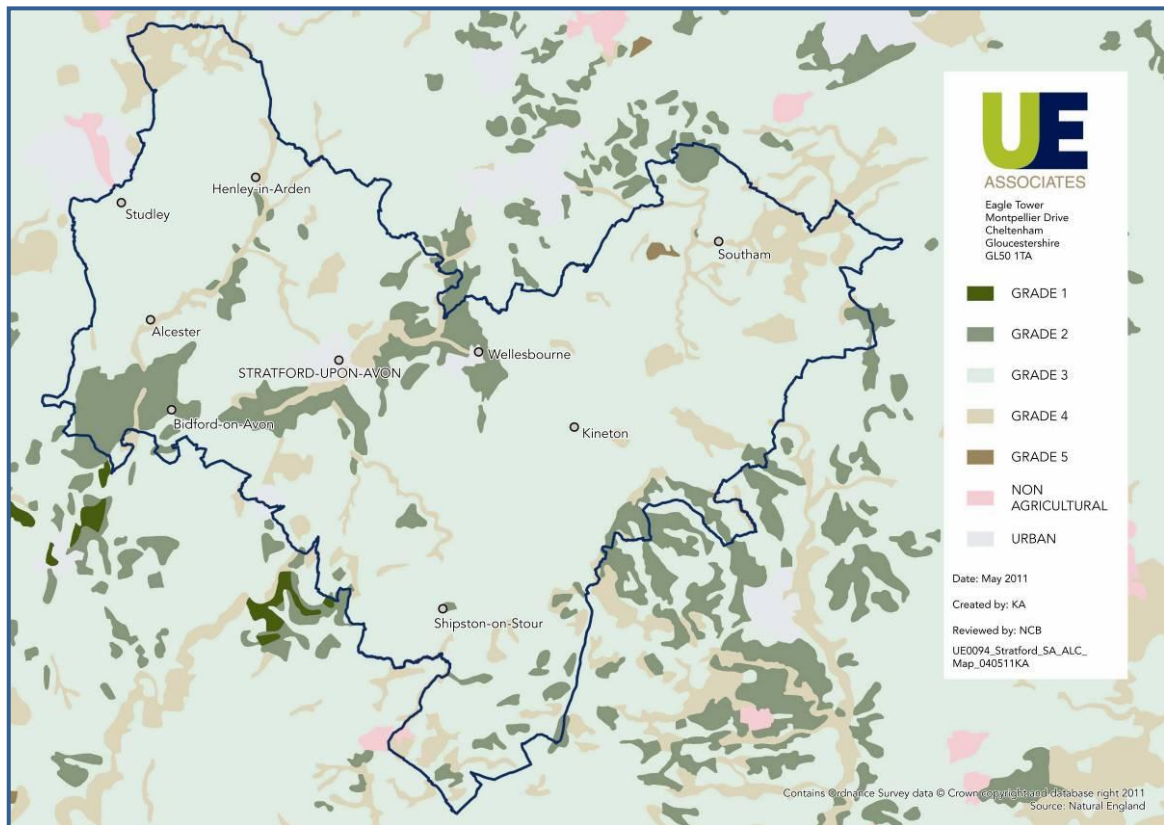
Figure 3.5: Agricultural Land Quality in Stratford-on-Avon

3.9 SA Objective 8: Reduce air, soil and water pollution

3.9.1   Air quality issues in the district are focused 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.

3.9.2   All six Housing Development Options, to a degree, promote a dispersed 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.

3.9.3   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.

3.9.4   In broad terms Option A has the greatest potential to contribute to air quality issues within Stratford-upon-Avon, through concentrating a larger proportion of development in the town. This option has the potential to increase localised traffic flows within the town and the vicinity. Similarly Option B has the greatest potential to contribute to air quality issues within the main rural centres through promoting the greatest concentration of development. Both these options have implications for transport routes with air quality issues.

3.9.5   Both Options A and B have the greatest potential to support a reduction in transport emissions through locating development close to the main settlements in the district with the broadest range of services. Options A and B have the greatest potential through public transport links to support the limitation of emissions from car use. A focus on promoting non-motorised modes of transport to shops and services coupled with less of a need to travel will help reduce air quality issues. In the longer term this will help reduce overall traffic levels from new residential developments.

3.9.6   Options C, D, and to a greater degree E, and F are less likely to affect current air quality hotspots through a wider dispersed approach to development compared to Options A and B. Options C, D and more so E, and F, have the potential to facilitate car dependency. These options direct a larger proportion of residential development towards areas which may have limited access to a range of services.   This may have implications in terms of air quality if it prompts more people to drive to Stratford-upon-Avon to access facilities.

3.9.7   In broad terms Options A and B having a greater potential to develop underutilised land and previously developed sites. This may lead to the remediation of sites, should they be contaminated. Options E and F may have an increased likelihood of developing land that has not been previously developed. All housing options seek to direct the same proportion of development to rural brownfield site thus all options have the potential to support soil and water quality at these locations.

3.9.8   The direction of development will need to ensure that waste water networks and treatment works have sufficient capacity to meet demand associated with new housing development. The draft Stratford-on-Avon Core Strategy (2010) HRA undertaken by Levett-Therivel (2010) highlighted a number of locations where waste water capacity issues existed. Avoiding water and soil pollution issues will largely depend on the incorporation of high quality drainage systems and infrastructure to cope with growth.

3.10   SA Objective 9: Reduce waste generation and disposal, and achieve the sustainable management of waste

3.10.1   It is uncertain as to which the extent to which the housing options will effect waste generation, disposal and sustainable waste management. The Core Strategy will play an important role in promoting sustainable waste management and waste disposal as a whole for the district with the right policies.

3.10.2   Options A and B have the most potential to encourage a greater degree of recycling. 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)). Through directing a greater proportion of development towards the district's main settlements, Options A and B, a larger proportion of people may have access to recycling centres as opposed to smaller rural settlements. In principle by dispersing development through the district, Options E and F may limit the accessibility for new residential development to recycling facilities.

3.10.3   In practice it is difficult to ascertain the habits of different demographics at different locations. Waste collections coupled with provision to separate out waste at the home may reduce the need for people to travel to recycling facilities. The sustainable management and reduction of waste will depend on policies set out in the Core Strategy more so than the distribution of development.

3.11   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

3.11.1   The Scoping Report (UE Associates, 2011) identified a number of key sustainability issues are linked to transport and accessibility in the district. This includes congestion 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.

3.11.2   Stratford-upon-Avon is the principle settlement within the district occupying a central location in relation to transport routes and has the broadest range of services. In this context housing Option A is most likely to support accessibility of new residential development to the broadest range of services. It is more likely to support the use of public transport and walking and cycling networks. Option A is also likely to maximise the volume of people utilising alternative sustainable modes of transport. Transport improvements in Stratford-upon-Avon have the potential to improve accessibility for a larger population including local residents and visitors. A focus on Stratford-upon-Avon may lead to adverse effects on traffic and congestion if significant improvements to the public transport system are not made.

3.11.3   Housing Option B is also likely to support the aspirations of this SA objective.   Focusing development to the main rural centres of the district with a broad range of services will reduce the need to travel (see **Figure 3.6**). The main rural centres have a relatively well established public transport network which may attract new users. The option will, to a lesser extent than Option A, support the reduction in the need to travel and support the use of public transport, walking and cycling.

3.11.4   Options C, D, and to a greater extent E, and F are less likely to support development that is focused to areas with the broadest range of services. These options are unlikely to help reduce the high car dependency of the district set out in the Scoping Report (UE Associates, 2011). The Scoping Report (UE Associates 2011) suggests smaller settlements within rural areas are generally reliant on infrequent bus services or community transport services. They are also unlikely to improve the accessibility to services and facilities and are more likely to increase the proportion of residents commuting significant distances for work, leisure and recreational purposes. Options E and F have the greatest potential to increase the proportion of people dependent on car use in rural areas. Options E and F will support the viability of existing services in the wider district. Options E and F and to a lesser extent, C and D have the potential to stimulate population growth in the wider district. In the long term this could potentially lead to new services in response to demand from population growth. This will help limit the need to travel for existing residents.
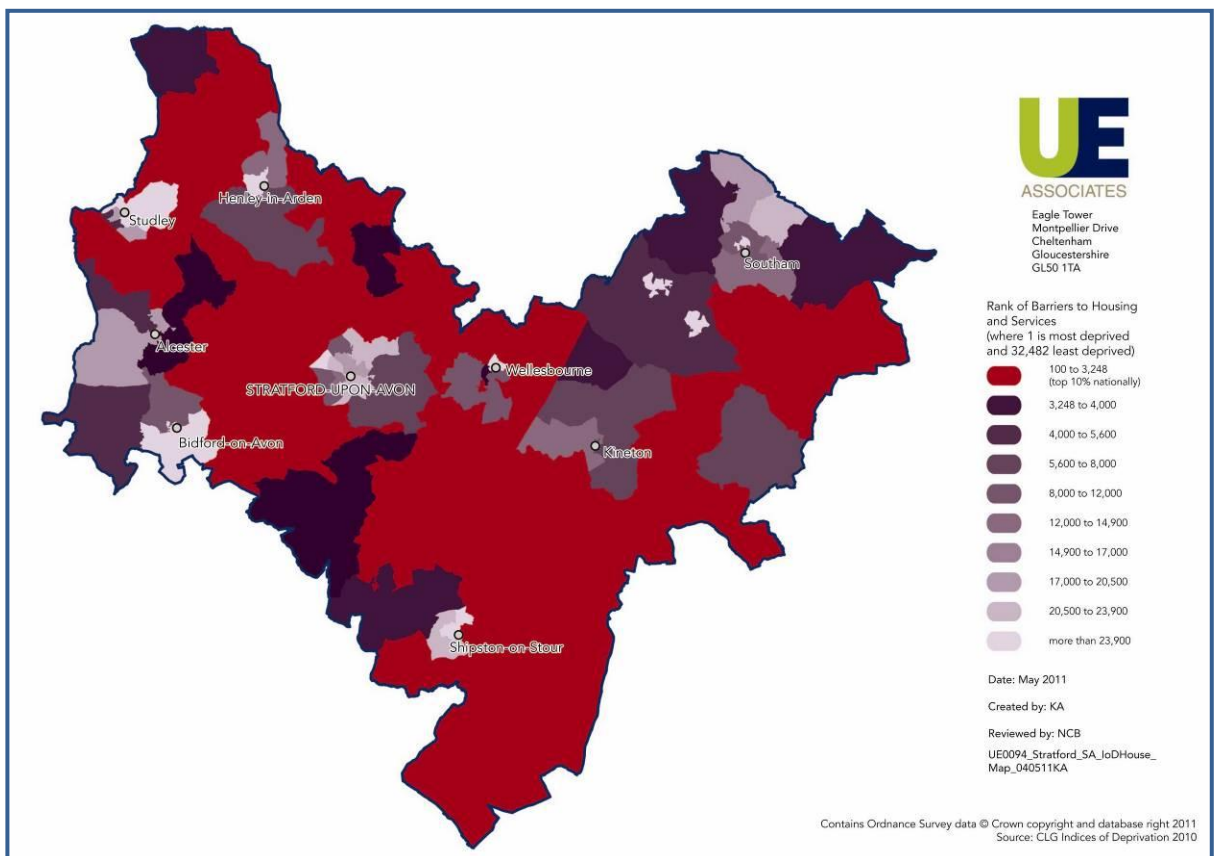

Figure 3.6: Index of Multiple Deprivation, Barriers to Housing and Services Category (Source UE Associates, 2011)

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

3.12.1   Option A is more likely to support the vitality of services in the town of Stratford-upon-Avon rather than support the vitality of services within the wider district, especially smaller settlements. This option is also less likely to improve the accessibility to services and amenities for those living in rural areas. In addition, this option is less likely to support the provision of affordable homes within many smaller settlements in the wider district.

3.12.2   Option B is less likely to support the vitality of services within smaller settlements in the wider district. Both Options A and B seek to direct 80% of new development towards Stratford-upon-Avon and the main rural centres of Alcester, Bidford-on-Avon, Henley-in-Arden, Kineton, Shipston-on-Stour, Southam, Studley and Wellesbourne. This concentration of development is less likely to facilitate an increase in provision of services in smaller settlements of the district or lead to transport improvements within the wider district. These two options have the potential to direct investment in services away from rural areas and could exacerbate existing barriers found within rural areas, such as a lack of affordable housing.

3.12.3   The effect of Option B in relation to this SA Objective will 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.

3.12.4   Options C, D and to a greater extent E and F, are more likely to support rural services by promoting 20%, 30% 55% and 50% of new residential development towards local services villages respectively. These options have the potential to support the vitality of rural services and could potentially increase the provision of affordable housing within the district. It should be noted that the extent to which Options, C, D, E and F will support accessibility to services depends on the degree to which new housing development is accompanied by an increase in service provision, such as shops, public transport and sports facilities.

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

3.13.1   Each of the housing options promote a relative degree of housing dispersal thus each have the potential to limit the need to promote development on the edges of towns and villages on greenfield sites. Despite this a number of broad conclusions can be made.

3.13.2   Housing Option A, through a focus on Stratford-upon-Avon has the greatest potential to limit the loss of greenfield land in the wider district by focusing 50% of development within the town. Option A will help limit the degradation of settlement edges of rural villages and main rural centres. This approach will also help limit the loss of agricultural land within the wider district. Option A has the greatest potential to impact the urban fringe and distinctness of Stratford-upon-Avon. The magnitude of housing directed towards Stratford-upon-Avon could potentially be greater than the availability of brownfield sites. This may require housing to be sited on the greenfield urban fringe of the town.

3.13.3   Option B has the greatest potential to affect the local distinctiveness and lead to degradation of the urban fringes of the main rural centres. This option is similar in respect to Option A as both options direct 80% of development towards Stratford-upon-Avon and the main rural centres. This option will aid in protecting the settlement fringes and distinctiveness of smaller settlements in the district but is more likely to adversely affect main rural centres and Stratford-upon-Avon.

3.13.4   Options C and D have the potential to impact on a greater number of settlements. This will occur to a lesser extent compared to Options A and B, due to the dispersed nature of the options. Options E and F have the greatest potential to impact on the integrity of settlement edges of the smaller villages of the district. Option E could help protect the character of the main rural centre and Stratford-upon-Avon. Options E and F are best placed to support the utilisation of under-utilised land on the urban fringes at a range of settlement scales due to the wider dispersed approaches of the options. This could lead to the loss of agricultural land, the quantity and magnitude may be reduced.

3.13.5   The extent of the impacts on the integrity of the district's countryside largely depends on the location and design of residential development. The main issues surrounding this SA objective is the order of magnitude and scale of importance in relation to other SA objectives. Focusing on Option A may impact less settlements but the magnitude could be greater. Focusing on Options E or F will impact more settlements but with a lesser magnitude. The capacity for each settlement to absorb residential housing without adversely impacting the integrity of the district's countryside is a critical factor.

3.13.6   A dispersed approach has the potential to impact on the distinctiveness of a greater number of settlements. This will reduce the concentration of future residential development away from a focus on an individual settlement, thus may reduce the magnitude of any potential impacts. A dispersed approach is more likely to enable effective mitigation of potential adverse effects. A focus on an individual settlement promoted by Option A may increase the difficulty with which effective mitigation could be employed.

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

3.14.1   As highlighted by the findings of the Joint Housing Needs Assessment for south Warwickshire (2006), nearly 80% of the total level of net unmet housing need in the Stratford-on-Avon district is located outside of the town of Stratford-upon-Avon. In this context Option A is less likely to support this SA objective. Option B is relatively a better option, however, together both Options A and B support directing 80% towards Stratford-upon-Avon and the main rural centres. Options C and B are an improvement upon Options A and B but it is Options E and F which are best placed to support this SA objective.

3.14.2   Options E and F are more likely to meet the housing needs of the district by directing residential development towards smaller rural settlements and service villages. This will help support the supply of affordable housing within the wider district. The SA Scoping Report (UE Associates, 2011) suggests there is a significant shortage of affordable homes in the wider district amongst the smaller service villages.

3.14.3   It should be noted that all housing options promote a degree of housing dispersal thus each have the opportunity to support this SA Objective. All housing options are likely to support environmentally sound homes in conjunction with the code for sustainable homes.

3.15   SA Objective 14: Safeguard and improve community health, safety and wellbeing

3.15.1   A major factor in supporting community health and wellbeing is access to healthcare, sports, recreation and leisure facilities.   The housing options which would facilitate ease of access to these facilities are likely to perform well against this SA objective.
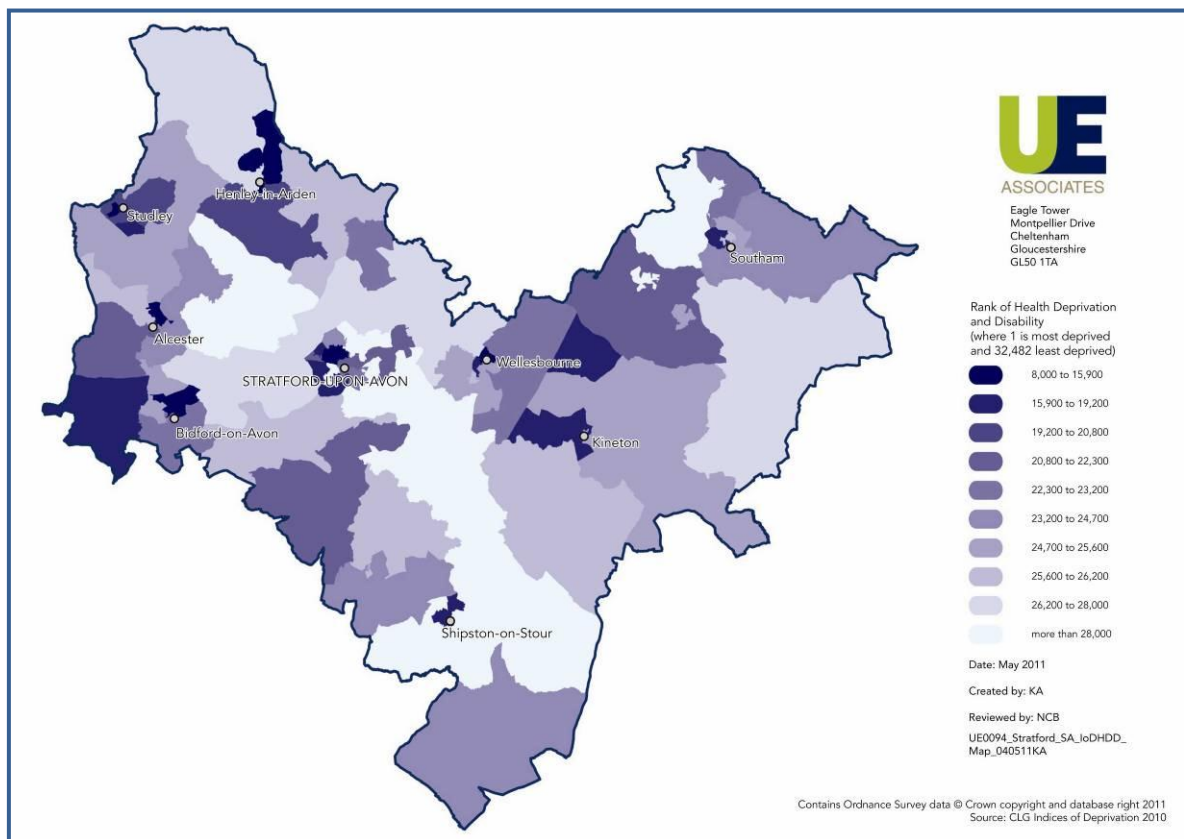
Figure 3.7: Index of Multiple Deprivation in Stratford-on-Avon: Health deprivation and disability ((source: ONS 2010) UE Associates, 2011)

3.15.2   In theory options which propose to direct housing towards areas with the broadest range of healthcare and recreational facilities are more likely to support this SA objective. Options A and B both propose to direct 80% of residential development towards Stratford-upon-Avon and the main rural centres. This will locate the majority of housing in locations with the broadest range of services.

3.15.3   Options E and F and to a lesser extent C and D, are less likely to direct housing towards locations with the broadest range of services. The ability of these housing options to support the health and wellbeing of residents will be via improvements in accessibility to existing services and the provision of new facilities.

3.15.4   It should be noted that although the larger settlements of the district may have more services and facilities than smaller settlements, it is the capacity to accommodate growth which is an important factor. **Figure 3.7** shows that the most deprived areas of Stratford-on-Avon in terms of health deprivation and disability are the main urban centres. This is due in part to a combination of health, cultural and economic issues.

3.15.5   Health and wellbeing will also be influenced by the ability of new development to encourage healthier and active life styles. Option A and B are better placed to provide access to a range of transport modes to travel to and from work. Whilst this is positive these options have the ability to concentrate more people in a limited number of settlements, adding pressure to existing services and recreational open space. Options E and F direct development towards areas without the broadest range of facilities and have the potential to facilitate car dependency. Despite this Options E and F are more likely to support existing facilities and encourage the provision of new facilities in rural settlements. These options are better placed to maximise green infrastructure networks across the district to support health and wellbeing. These options will also bring benefits to existing residents.

3.15.6   The relative advantages and disadvantages of each housing option will depend on policy direction from the Stratford-on-Avon Core Strategy. Health and wellbeing is influenced and dependant on various factors such as wealth, behaviour and lifestyles, thus housing options alone will not necessarily lead to improvements.

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

3.16.1   Each Housing Development Option has the opportunity to support the local economies of all settlement categories by promoting residential development across the district and within a range of settlement sizes.

3.16.2   Housing Options A and B, by focusing 80% of residential development towards Stratford-upon-Avon and the main rural centres, will do the most to support the economies of the largest urban centre and rural centres within Stratford-on-Avon. These options will also enable places of work to be accessible from a choice of transport modes. Options C, and D, and to a greater extent Options E and F will contribute the most to supporting the vitality and viability of the smaller settlements of the district.

3.16.3   In terms of employment growth, the relative advantages and disadvantages of each of the options will depend on the siting of new areas of employment. If new areas of employment are directed towards rural areas then options E and F would be well placed to support this SA objective. However, if employment growth is to be directed towards the larger settlements than Options A and B will be better placed to support this SA objective.

3.16.4   Accessibility to new and existing employment sites is critical to ensure economic growth is sustainable. In broad terms focusing residential growth to Stratford-upon-Avon and the main rural centres may support economic growth in these areas. Residential growth in the wider district may facilitate economic growth in rural areas. This growth would be dependent on policies on employment sites and influenced by the skills profile of local residents. Growth could be stifled if not accompanied by enhancements to the transport networks.

3.17   Summary of the Appraisal of Housing Development Options

3.17.1   The assessment reveals uncertainty with regards to the housing development options and the SA objectives. Despite this uncertainty a number of broad conclusions can be made with regard to the relative sustainability performance of each housing option.

3.17.2   Option A focuses most development on Stratford-upon-Avon and has the most potential to promote the use of sustainable modes of transportation and support accessibility from new housing development to a full range of services and health facilities. This will help reduce greenhouse gas emissions and encourage non-motorised modes of transports as services are close by. Option A has the greatest potential to impact the urban fringe and distinctness of Stratford-upon-Avon by requiring housing to be sited on the greenfield urban fringe of the town. In addition, nearly 80% of housing needs are located outside Stratford-upon-Avon therefore option A is less likely to meet the housing needs within the district.

3.17.3   Option B is similar to option A in that 80% of residential development is focused in Stratford-upon-Avon and the main rural centres. The main rural centres have relatively good public transport routes which may reduce car dependency and reduce greenhouse gas emissions. The main rural centres also have easy access to services and health facilities. Option B is less likely to support the vitality of services found within the wider district. This option will aid in protecting the settlement fringes and distinctiveness of smaller settlements in the district but is more likely to adversely affect main rural centres.

3.17.4   Option C is likely to locate residential development away from key services and facilities and therefore potentially encourage car use and increase emissions from transport. Due to increased dispersal, option C is likely to better meet the housing needs of the district than option A.

3.17.5   Option D is similar to option C as the level of dispersion could encourage car use and consequently increase greenhouse gas emissions. Smaller settlements within rural areas are generally reliant on infrequent bus services or community transport services. They are also unlikely to improve the accessibility to services and facilities and are more likely to increase the proportion of residents commuting significant distances for work, leisure and recreational purposes. Option D is more likely to support rural services and meet the housing needs of the district.

3.17.6 The wide distribution of development in option E is less likely to concentrate housing development in areas with access to a full range of amenities and facilities and serviced by a high quality public transport network. Option E has the potential to facilitate an increase in the need to travel causing a rise in the proportion of car use and increase the volume of greenhouse gas emissions from the transport sector. Option E is likely to meet the district's housing needs and support rural services. However the accessibility to services depends on the degree to which new housing development is accompanied by an increase in service provision, such as shops, public transport and sports facilities.

3.17.7 Similarly to option E, option F has the most potential to support existing services found within the wider district. This option will support the provision of affordable homes which meet housing needs in rural areas. This option will continue to facilitate the high car dependency of the district and may increase the difficulty of the district to reduce carbon emissions.

3.17.8 The sustainability performance of the housing options has been conducted at a high level of assessment and the broad conclusions are dependent on a combination of factors. The relative sustainability of each option will largely depend on site locations, layout and design.

4   Conclusions and Next Steps

4.1   Conclusions

4.1.1   The assessment presented in this Part 3 Options SA Report sets out the third and final stage of the appraisal of reasonable alternatives. It is anticipated that this will be used to inform the adoption of a preferred approach for the Core Strategy.

4.1.2   It should be noted that at this high level of assessment it remains difficult to identify with certainty an Option which is clearly the most sustainable option. At this level of assessment the difficulty in appraising orders of magnitude make it difficult to differentiate between Options A and B or Options C and D, or E and F. In most cases it has been possible to show clear advantages and disadvantages between options where there is a significant difference, such as between Options A and E. Where there are no obvious significant difference possible impacts at the broad locations are relatively similar.

4.1.3   The assessment matrix is a high level indicator of likely significant effect associated with an options performance against SA objectives. The table provides an introduction to the "feel" of the option and cannot be used as a sole indicator. To explore the table's findings in more detail, supporting text is provided to explore and interpret the findings.

4.1.4   A common error of any assessment process would be to sum the scores for each option. It is essential to recognise that the SA objectives each represent collective, yet distinctive, aspects of sustainability. In the case of this assessment, SA objectives 1-4, 6, 8, and 9 are equally difficult to draw conclusions about effects. They are all marked as uncertain in the table. Likewise, objectives 13 and 15 score equally for all six options. In this case the result is positive. Only objectives 5, 7, 10, 11, 12, and 14 reveal differences in scores. On this basis no clear option is revealed as performing better than another across all categories. Instead, conclusions can be made in relation to the fact that particular SA objectives will benefit from some options whilst experience adverse effects from others.

4.2   Next Steps

4.2.1   These findings will be used to help inform and influence the development of preferred policy options for the Core Strategy. The sustainability appraisal will continue to inform and influence this process by feeding into the development of a proposed submission document. This will include a detailed assessment of the policies and proposals included in early versions of the proposed submission document, utilising the SA Framework of objectives and indicators developed during the scoping stage of the SA. Following this process, the finalised consultation version of the submission document will be assessed and a full SA Report, addressing the requirements of the SEA Directive will be prepared.

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ENVIRONMENTAL PLANNING
POLICY | DESIGN | PRACTICE

Appendix A: 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.	
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	
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)
				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?	Amount of new greenspace created per capita	
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	
		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	
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	
		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.
		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 wellbeing.	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	Area of parks and green spaces per 1,000 head of population	SDC open space standards are currently being developed.

				network?	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	
				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	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)
				The number of sports pitches available to the public per 1,000 population	
		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	

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	

Appendix B: Key issue identified through Scoping.

SA Theme	Key Issues
Accessibility and Transport	- Congestion issues in and around Stratford-upon-Avon. - Poor accessibility to services, facilities and amenities from rural areas. - High car dependency and access issues for those without access to a car - Effect of proposed residential, employment and retail growth on the district's transport networks. - Mitigation of the adverse impacts of traffic on all settlements.
Air Quality	- Air Quality Management Areas exist in Stratford-upon-Avon, Henley-in-Arden and Studley. - Effect on air quality from an increase in traffic stimulated by residential, employment and retail growth in the district. - A growth in visitor numbers has the potential to have impacts on air quality from increased traffic flows.
Biodiversity and Geodiversity	- A substantial number of nationally designated nature conservation sites exist in the district. The proportion of SSSIs in favourable condition has declined slightly since 2009 - A significant number of protected species are present in the district. - Growth earmarked for Stratford-on-Avon will place pressures on biodiversity. Potential impacts include habitat fragmentation resulting from new development areas and recreational pressures on wildlife sites. - Biodiversity may be affected from noise and light pollution issues generated from increases in traffic flows. - Enhancements to the district's green infrastructure network will support local and sub-regional biodiversity networks through helping to improve connectivity for habitats and species. - Geodiversity is a key contributor to the district's natural (and built) environment.

Climate Change	
	▸ Climate change has the potential to increase the risk of fluvial flooding in the district.
	▸ A number of more built up areas in the district have sensitivity to increased risk of flooding from surface run off.
	▸ Increased occurrence of drought as a result of climate change is likely to reduce water availability in the wider sub-region.
	▸ High quality landscapes in the district have the potential to be affected by changes in rainfall, invasive species, and changes in farming practices, soil erosion and renewable energy provision.
	▸ Transport is by far the sector with the highest emissions in Stratford-on-Avon. An increase in traffic from new growth areas in the district has the potential to undermine the realisation of the government target of a 34 per cent cut in greenhouse gas emissions by 2020.

Economic Factors	
	▸ There is currently a lack of opportunities in the district for research and design/high technology businesses.
	▸ Tourism and the visitor economy are important for the local economy.
	▸ Whilst Stratford-on-Avon has low unemployment and a higher proportion of the workforce working in higher level and higher paid professions, many of these jobs are located outside of the district. This contributes to a large degree of out-commuting from the district. There is also a high degree of in-commuting of people in lower paid jobs who cannot afford to live in the district.
	▸ New business start-ups should be encouraged in the district.
	▸ The quality of broadband provision in rural areas of the district varies. There is significant scope to improve coverage and connection speeds.
	▸ Productivity levels are relatively high but economic growth in recent years has been below the national average.
	▸ Unemployment levels are much lower than the regional and national average.
	▸ There is considerable mismatch between the average earnings of local residents and house prices.

Health	
	▸ Whilst health levels are generally high in Stratford-on-Avon, health inequalities exist between the most and least deprived areas of the district.
	▸ Levels of physical activity are increasing health issues for the district, including amongst children.
	▸ Stratford-on-Avon, in common with many other areas, is experiencing an ageing population. This will have implications for health service provision and accessibility to other services, facilities and amenities.

Historic Environment	
	▸ 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.
	▸ Distinctive historic environment assets are at risk from neglect or decay. This is particularly relevant for non-designated assets which are not afforded the same degree of protection as designated sites and areas.
	▸ Quarries producing local building stone have largely closed in the district, creating issues relating to repairing local buildings and retaining local distinctiveness.

	‣ Effects on the historic environment from inappropriate and poor design and layout of housing, employment and retail provision. ‣ Growth areas in the district have the potential to lead to effects on historic landscapes and cause direct damage to archaeological sites, monuments and buildings. ‣ Archaeological remains, both seen and unseen have the potential to be affected by new development areas.
Housing	‣ The population of Stratford-on-Avon is expected to grow significantly in the next twenty years. This will increase pressures on housing provision in the district. ‣ An ageing population in the district will increase demand for certain types of housing. ‣ Market housing in Stratford-on-Avon is the least affordable in Warwickshire. ‣ There is a shortage of affordable housing in the district, with an annual shortfall of 532 affordable homes. Affordability in rural areas is a particular issue. ‣ There is inadequate provision of housing and support for people who are vulnerable or at risk of homelessness. ‣ There is a need to improve substantially the energy efficiency of much of the existing housing in the district.
Landscape	‣ Potential effects on the integrity of areas with landscapes designated as part of the Cotswolds AONB. ‣ Effects on landscape and townscape quality from residential, employment and retail growth. ‣ Further loss of tranquillity from increasing traffic flows and new transport infrastructure. ‣ Effects on landscape quality from poor design and layout of new development areas. ‣ Pressures on non-designated sites and landscapes: These sites and areas play an important role in the cultural identity of the district and enable a wider understanding of the area's historic development. ‣ Loss of key landscape features such as woodland or hedgerows. ‣ Noise and light pollution issues from increases in traffic flows. ‣ Green Infrastructure: There are significant opportunities to improve linkages between areas of open space, parks and the open countryside.
Material Assets	‣ Stratford-on-Avon currently generates low levels of renewable energy. Significant opportunities exist in the district for increasing capacity, especially from wind power and biomass. ‣ Whilst recycling rates are very favourable compared to national and regional averages, continued improvements should be sought to meet national targets. ‣ Quarries producing local building stone have largely closed in the district, creating issues relating to repairing local buildings and retaining local distinctiveness. ‣ The transport of waste and minerals in the district has the potential to affect those living near routes used for this purpose. ‣ Demand for materials from new growth areas in the district and surrounding areas has the potential to increase demand for the district's aggregates.

Population and Quality of life	▸ The population of the district is expected to increase significantly in the next 20 years. Projections suggest that this could lead to a population increase of 20,000 from 2012 to 2030.
	▸ An ageing population and an increased dependency ratio in the district have the potential to lead to implications for service provision.
	▸ Whilst overall deprivation is low in the district, levels are significantly higher for the barriers to housing and services and geographical barriers IMD 2010 domains.
	▸ The development of a high quality and multifunctional green infrastructure network in Stratford-on-Avon will be a key contributor to quality of life in the district.
Soil	▸ Some areas of higher grade quality agricultural land may be under threat from new growth areas in the district and associated infrastructure.
	▸ Areas of land contamination may exist in the district.
	▸ The development of new and improved infrastructure to accompany growth has the potential to lead to an increase in soil erosion and soil loss.
Water	▸ Fluvial flooding is a significant risk for much of the district, including in Alcester, Bidford-on-Avon, Broom, Henley-in-Arden, Shipston-on-Stour, Stratford-upon-Avon, Southam and Wellesbourne.
	▸ Flooding from surface water runoff is also a significant issue for the more built up areas of the district. Some rural areas are also at risk from field run off.
	▸ Flooding from the overtopping of canals or the redistribution of excess water through the canal network is an issue at some locations.
	▸ Climate change is likely to increase the risk of all types of flooding present in the district.
	▸ Increased occurrence of drought as a result of climate change is also likely to limit water availability in the district through reducing groundwater levels. Many parts of the Avon's catchment area have been deemed as having 'no water available'.
	▸ Some parts of the centre and east of the district are covered by Source Protection Zones, indicating the risk to groundwater supplies from potentially polluting activities and accidental releases of pollutants. Groundwater is particularly vulnerable from diffuse pollution.
	▸ Chemical water quality in the district has seen overall improvements since 1990, with some fluctuations. Biological water quality has however decreased since 2002. Further improvements are therefore required to meet the target of all watercourses to reach 'good' biological and chemical water quality status by 2015, as required by the Water Framework Directive.

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