

Sustainability Appraisal of the South Warwickshire Local Plan

Regulation 18: Issues and Options Stage

Volume 2 of 3: Main Sustainability Appraisal Report

November 2022



LEPUS CONSULTING
LANDSCAPE, ECOLOGY, PLANNING & URBAN SUSTAINABILITY

Sustainability Appraisal of the South Warwickshire Local Plan

Regulation 18: Issues and Options Stage

Volume 2 of 3: Main SA Report

LC-813	Document Control Box
Client	Stratford-on-Avon District Council and Warwick District Council
Report Title	Sustainability Appraisal of the South Warwickshire Local Plan: Regulation 18 SA Report.
Filename	LC-813_Vol_2_SWLP_Reg18_I&O_SA_Report_32_221122LB.docx
Status	Final Version & Accessible
Date	November 2022
Author	Various
Reviewed	LE, RG
Approved	ND

Front cover: St Nicholas Church at Alcester, Stratford-on-Avon, Warwickshire

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produced to assess the sustainability effects of the South Warwickshire Local Plan and meets the requirements of the SEA Regulations. It is not intended to be a substitute for an Environmental Impact Assessment (EIA) or Appropriate Assessment (AA).

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Acronyms & Abbreviations

A&E	Accident and Emergency	MSA	Minerals Safeguarding Area
ALC	Agricultural Land Classification	NNR	National Nature Reserve
AONB	Area of Outstanding Natural Beauty	NO₂	Nitrogen Dioxide
AQMA	Air Quality Management Area	NPPF	National Planning Policy Framework
BL	Broad Location	NRN	Nature Recovery Network
BMV	Best and most versatile	ONS	Office for National Statistics
CAMS	Catchment Abstraction Management Strategy	OS	Ordnance Survey
DBEIS	Department for Business, Energy and Industrial Strategy	PM₁₀	Particulate Matter (10 micrometres)
DEFRA	Department for Environment, Food and Rural Affairs	PPG	Planning Practice Guidance
DfT	Department for Transport	PRoW	Public Rights of Way
EA	Environment Agency	RBMP	River Basin Management Plan
EU	European Union	RIGS	Regionally Important Geodiversity Site
GHG	Greenhouse gas	RLS	Royal Leamington Spa
GI	Green Infrastructure	RPG	Registered Park and Garden
GIS	Geographical Information System	SA	Sustainability Appraisal
GP	General Practitioner	SAC	Special Area of Conservation
ha	Hectare	SEA	Strategic Environmental Assessment
HER	Historic Environment Record	SM	Scheduled Monument
HGV	Heavy Goods Vehicle	SPA	Special Protection Area
HLC	Historic Landscape Characterisation	SPZ	Source Protection Zone
HRA	Habitats Regulations Assessment	SSSI	Sites of Special Scientific Interest
IRZ	Impact Risk Zone	SuDS	Sustainable Drainage System
KWS	Key Wildlife Site	SWLP	South Warwickshire Local Plan
LCT	Landscape Character Type	UNFCCC	United Nations Framework Convention on Climate Change
LNR	Local Nature Reserve	WCS	Water Cycle Study
LTP	Local Transport Plan	WHS	World Heritage Site
LWS	Local Wildlife Site	WRMP	Water Resources Management Plan
LVIA	Landscape and Visual Impact Assessment	ZOI	Zone of Influence
MHCLG	Ministry of Housing, Communities and Local Government		

Executive Summary

About this report

- E1 Lepus Consulting is conducting a Sustainability Appraisal process for the South Warwickshire Local Plan (SWLP) Authorities of Stratford-on-Avon District Council and Warwick District Council to help them prepare the SWLP. The appraisal process is known as Sustainability Appraisal (SA) and is prepared during a number of different stages to facilitate iteration between the Plan makers (the SWLP Authorities) and the appraisal team (Lepus Consulting).
- E2 SA is the process of informing and influencing the preparation of a development plan to optimise its sustainable development performance as the plan is prepared over several distinct stages including examination in public, and finally, adoption.

Assessing the Issues and Options Version of the South Warwickshire Local Plan

- E3 The current plan making phase is called the Issues and Options stage. The Issues and Options consultation is the second stage in preparing the South Warwickshire Local Plan, following the Scoping and Call for Sites consultation that took place in 2021. A Local Plan sets out the planning policies that the councils will use to assess applications for development as well as identifying (allocating) sites for new development proposals to meet the future development needs in terms of housing and job growth.
- E4 To help the Councils ensure that the new Local Plan includes the most suitable planning policies and development allocations, the sustainability appraisal identifies, describes and evaluates a number of different reasonable alternative policies and development locations.

Identification of reasonable alternatives

- E5 The Councils have recognised that they wish to explore the following reasonable alternatives as part of the plan making process:
- 5x Growth Options which provide details about where housing and employment development should be distributed at a strategic scale across the Plan area;
 - 7x New Settlement Locations for large scale development of not less than 6,000 new homes and associated infrastructure;
 - 32x Broad Locations (BL) which represent options for up to 2,000 homes located around the Main Settlements such as Warwick, Stratford-upon-Avon and Southam for medium scale, chiefly residential, development and associated infrastructure in any one BL
 - 22x Small Settlement Locations (SSL) for intermediate scale, chiefly residential, development for between 50-500 homes in any one location, typically associated with smaller settlements and villages such as Wootten Wawen and Radford Semele; and
 - 116x Policy options for shaping of the relevant policy. Subjects include for example climate change, tourism and employment.

Description of the reasonable alternatives

- E6 The Issues and Options Consultation Version of the SWLP provides descriptions of the reasonable alternative Housing Number Options, Growth Options, New Settlement Options and Policy Options.
- E7 The sustainability appraisal process has been used to help identify different locational reasonable alternatives. Following receipt of the areas of search to be used for each types of location, Geographic Information Systems have been used to help identify boundaries for the 32 BLs and 22 SSLs.
- E8 A total of 32 BL reasonable alternatives have been identified using principles associated with 20-minute neighbourhoods. Such principles include planning for the liveability of neighbourhoods, with an emphasis on people spending more time locally, working at home if possible, using public green space, cycling and walking instead of using cars and connecting with neighbours.
- E9 The following settlements have been used to identify Broad Locations that are within 20 minutes' walk or ride (approximately 800m in any one direction) from key services such as public transport access point, (train station or bus station), GP surgery, a primary school, or supermarket:
- Alcester;
 - Kenilworth;
 - Royal Leamington Spa and Whitnash;
 - Shipston;
 - Southam;
 - Stratford-upon-Avon, and;
 - Warwick.
- E10 All BLs have been identified to be capable of delivering up to 2,000 homes and significant areas of greenspace to facilitate effective green infrastructure planning. Each BL is identified in **Chapter 4** and **Appendix B** of this report.
- E11 A total of 22 reasonable alternative SSLs have been identified using 20 minute neighbourhood principles and scaled accordingly. The small settlements have been used to identify SSLs that are within easily accessible on foot or by riding (approximately 400m in any one direction) from key services in the settlement. These SSLs are:
- Barford;
 - Bearley;
 - Bidford;
 - Bishop's Tachbrook;
 - Claverdon;
 - Cubbington;
 - Earlswood;
 - Hampton Magna;
 - Hatton Park;
 - Hatton Station;
 - Henley;
 - Kineton;
 - Kingswood;

- Long Itchington;
- Radford Semele;
- Salford Priors;
- South Coventry;
- Studley;
- Wellesbourne;
- Wilmcote;
- Wood End; and
- Wootton Wawen

E12 All SSLs have been identified to be capable of delivering between 50 and 500 new dwellings and significant areas of greenspace to facilitate effective green infrastructure planning. Each SSL is identified in **Chapter 5** and **Appendix C** of this report.

E13 A total of seven New Settlements have been evaluated alongside five growth options. Both these types of reasonable alternative have been identified through earlier consultation on the SWLP which took place in 2021.

Evaluation of the reasonable alternatives

E14 The appraisal process has used a tool called the SA Framework to evaluate how the different reasonable alternatives perform against sustainability objectives.

E15 The SA Framework provides a way in which sustainability effects can be described, analysed and compared. SA Objectives and indicators can be revised as further baseline information is collected and sustainability issues and challenges are identified and are used in monitoring the implementation of the Local Plan.

E16 Evaluation of the Spatial Growth Options, Broad Locations, Small Settlements and New Settlements all include a summary, by SA Objective, of best performing options. Any exercise to identify best performing options which has been prepared at the desktop level has its limitations. These are set out in the methodology. Readers are encouraged to recognise that the scores used in the technical appendices are a guide and that the full evaluation of all reasonable alternatives can be found in the narrative text accompanying the scores and in the main body of the report.

E17 At this stage it is difficult to identify overall stand out best performing options because they all perform 'best' for different SA Objectives and rarely does one option emerge as a best overall option.

E18 It is however possible to begin to identify consistently poor-performing options and these should be possibly removed from further consideration. For example, Stratford Northeast.

Next steps

E19 This Regulation 18 Issues and Options SA Report is subject to consultation alongside the Issues and Options version of the SWLP.

E20 This report represents the latest stage of the SA process. The SA process will take on board any comments on this report and use them to furnish the next report with greater detail and accuracy.

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1 Introduction

1.1 This report

- 1.1.1 Stratford-on-Avon District and Warwick District Councils have commissioned Lepus Consulting to carry out a Sustainability Appraisal (SA) of the South Warwickshire Local Plan (SWLP).
- 1.1.2 The purpose of this SA report is to assess the sustainable development implications of proposals presented in the Issues and Options Consultation Version of the South Warwickshire Local Plan (SWLP).
- 1.1.3 A wide range of reasonable alternative policy and growth options have been identified through the plan making phase known as Issues and Options. The sustainability appraisal outputs will help the SWLP Authorities to identify sustainable development options and prepare a local plan which is economically, environmentally, and socially sustainable.
- 1.1.4 A sustainability appraisal is a systematic process that must be carried out during the preparation of local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives.

1.2 The SWLP area

- 1.2.1 Stratford-on-Avon District and Warwick District Councils together comprise roughly 126,390ha, with a combined population of approximately 283,200 people according to the Office for National Statistics (ONS) Census data for 2021¹.
- 1.2.2 Stratford-on-Avon District and Warwick District lie within the south of Warwickshire County. As illustrated in **Figure 1.1**, the majority of Stratford-on-Avon District is largely rural in nature. In contrast, Warwick District covers a smaller geographic area and is more densely populated.
- 1.2.3 The town of Royal Leamington Spa is the most populous town in the Plan area with a population of roughly 52,000. The town is characterised by its regency architecture. Royal Leamington Spa is adjoined with the town of Warwick in the west, Whitnash town in the south and is adjacent to Cubbington village. The river Leam runs through Royal Leamington Spa.
- 1.2.4 The town of Stratford-upon-Avon has a population of approximately 29,984. Stratford-upon-Avon is a medieval market town situated on the River Avon. The town has strong associations with its heritage interests and numerous Grade I, Grade II* and Grade II listed buildings are situated within it.
- 1.2.5 Together the two authorities contain important biodiversity sites, high quality landscape, and a wealth of historic assets. Notable features include the Cotswolds AONB which covers a small proportion of Stratford-on-Avon district in the south, Warwick Castle which is a Grade I listed building, as well as Registered Park and Gardens and the significant amount of Greenbelt land which cover the northern area of both districts.

¹ Office for National Statistics (2022) Population and household estimates, England and Wales: Census 2021. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesenglandandwales/census2021> [Date accessed: 01/11/22]

- 1.2.6 In general, the SWLP area has good connections through national and regional transport infrastructure, although there are some issues with rural accessibility^{2,3}. The area provides approximately 159,200 jobs⁴.

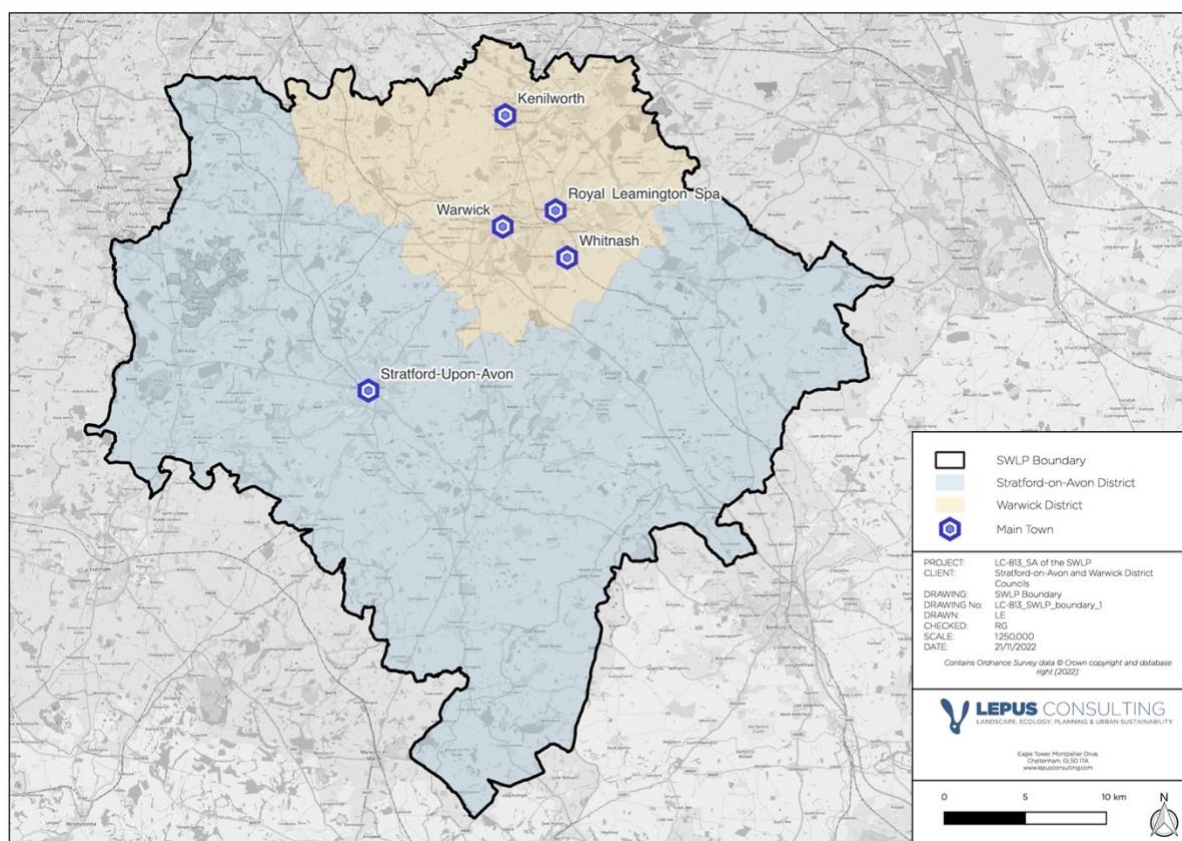


Figure 1.1: Stratford-on-Avon District Council and Warwick District Council administrative boundaries

² Warwick District Council (2015) TA1 – Warwick and Leamington Spa Transport Strategy – Sustainable Transport. Available at: https://www.warwickdc.gov.uk/downloads/file/2305/ta1_-_warwick_and_leamington_spa_transport_strategy_-_sustainable_transport_final_with_appendices_part_2_-_january_2015 [Date accessed: 21/06/22]

³ Stratford-on-Avon District Council (2012) Strategic Transport Assessment. Available at: <https://www.stratford.gov.uk/planning-building/technical-evidence.cfm> [Date accessed: 21/06/22]

⁴ Office for National Statistics (2020) Local Authority district – Business Register and Employment Survey. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/localauthoritydistrictbusinessregisterandemploymentsurveybrestable6> [Date accessed: 21/06/22]

1.3 The SWLP

- 1.3.1 The SWLP will consider the future growth needs, the overall strategy for delivering development across the Plan area, and the allocation of strategic sites to help meet these needs. The SWLP provides an opportunity to review and if necessary, amend and update the policies contained within the various adopted land use plans currently in operation throughout both districts to ensure that they continue to be effective and consistent with up-to-date planning policy requirements and best practice.
- 1.3.2 Key facts relating to the SWLP are presented in **Table 1.1**.

Table 1.1: Key facts relating to the SWLP

Responsible authority x2	Stratford-on-Avon District Council and Warwick District Council
Title of plan	South Warwickshire Local Plan
What prompted the plan (e.g. legislative, regulatory or administrative provision)	The SWLP is being prepared in accordance with the requirements of the Planning and Compulsory Purchase Act 2004 and The Town and Country Planning (Local Development) (England) Regulations 2012.
Area covered by the plan	Stratford-on-Avon District and Warwick District (see Figure 1.1).
Purpose and/or objectives of the plan	<p>The SWLP will set out the spatial planning strategy for the area, having due regard to other strategies and programmes.</p> <p>The SWLP will set out a long term strategy for how and where development should take place, the locations of new homes, services, and employment sites and how communities can meet their needs for housing and development and how the plan can respond to climate change. The Plan will replace the strategic policies of the existing Stratford-on-Avon District Core Strategy and Warwick District Local Plan.</p>
Contact point	<p>Stratford-on-Avon District Council The SWLP Team, Stratford on Avon District Council, Elizabeth House, Church Street, Stratford-upon-Avon, CV37 6HX swlp@stratford-dc.gov.uk</p> <p>Warwick District Council The SWLP Team Warwick District Council, Riverside House, Milverton Hill, Leamington Spa, CV32 5HZ swlp@warwickdc.gov.uk</p>

1.4 Sustainability Appraisal and Strategic Environmental Assessment

- 1.4.1 The requirements to carry out SA and SEA are distinct, although government policy advocates that both processes can be delivered using a single, integrated appraisal process.
- 1.4.2 The European Union Directive 2001/42/EC⁵ (SEA Directive) applies to a wide range of public plans and programmes on land use, energy, waste, agriculture, transport etc. (see Article 3(2) of the Directive for other plan or programme types). The objective of the SEA procedure can be summarised as follows: *“the objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development”*.
- 1.4.3 The SEA Directive has been transposed into English law by the Environmental Assessment of Plans and Programmes Regulations 2004⁶ (SEA Regulations). Under the requirements of the SEA Directive and SEA Regulations, specific types of plans that set the framework for the future development consent of projects must be subject to an environmental assessment. Therefore, it is a legal requirement for the SWLP to be subject to SEA throughout its preparation.
- 1.4.4 SA is a UK-specific procedure used to appraise the impacts and effects of development plans in the UK. It is required by S19(5) of the Planning and Compulsory Purchase Act 2004⁷ and should be an appraisal of the economic, social and environmental sustainability of development plans. The present statutory requirement for SA resides in the Town and Country Planning (Local Planning) (England) Regulations 2012⁸. SEA is a systematic process for evaluating the environmental consequences of proposed plans or programmes to ensure environmental issues are fully integrated and addressed at the earliest appropriate stage of decision-making.
- 1.4.5 Public consultation is an important aspect of the integrated SA/SEA process.

⁵ European Commission (2018) SEA. Available at: <https://ec.europa.eu/environment/eia/sea-legalcontext.htm> [Date accessed: 21/06/22]

⁶ The Environmental Assessment of Plans and Programmes Regulations 2004. Available at: <http://www.legislation.gov.uk/uksi/2004/1633/contents/made> [Date accessed: 25/04/22]

⁷ Planning and Compulsory Purchase Act (2004). Available at: <https://www.legislation.gov.uk/ukpga/2004/5/contents> [Date accessed: 25/04/22]

⁸ Town and Country Planning (Local Planning) (England) Regulations (2012). Available at: <http://www.legislation.gov.uk/uksi/2012/767/contents/made> [Date accessed: 25/04/22]

1.5 Best Practice Guidance

1.5.1 Government policy recommends that both SA and SEA are undertaken under a single process, which incorporates the requirements of the SEA Directive. This is to be achieved through integrating the requirements of SEA into the SA process. The approach for carrying out an integrated SA and SEA is based on best practice guidance:

- European Commission (2004) Implementation of Directive 2001/42 on the assessment of the effects of certain plan and programmes on the environment⁹
- Office of Deputy Prime Minister (2005) A Practical Guide to the SEA Directive¹⁰
- Royal Town Planning Institute (2018) Strategic Environmental Assessment, Improving the effectiveness and efficiency of SEA/SA for land use plans¹¹
- Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework (NPPF)¹² Paragraph 32.
- Ministry of Housing, Communities and Local Government (2019) Planning Practice Guidance (PPG)¹³

1.5.2 SA is an iterative process which should be undertaken alongside development of the SWLP to maximise its sustainability performance as summarised in **Figure 1.2**.

⁹ European Commission (2004) Implementation of Directive 2001/42 on the assessment of the effects of certain plan and programmes on the environment. Available at: http://ec.europa.eu/environment/archives/eia/pdf/030923_sea_guidance.pdf [Date accessed: 25/04/22]

¹⁰ Office of Deputy Prime Minister (2005) A Practical Guide to the SEA Directive. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practical_guidesea.pdf [Date accessed: 25/04/22]

¹¹ Royal Town Planning Institute (2018) Strategic Environmental Assessment, Improving the effectiveness and efficiency of SEA/SA for land use plans. Available at: <https://www.rtpi.org.uk/media/1822/sea-sappracticeadvicefull2018c.pdf> [Date accessed: 25/04/22]

¹² Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Date accessed: 25/04/22]

¹³ Department for Levelling Up, Housing and Communities & Ministry of Housing, Communities and Local Government (2021) Planning practice guidance. Available at: <https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal> [Date accessed: 25/04/22]

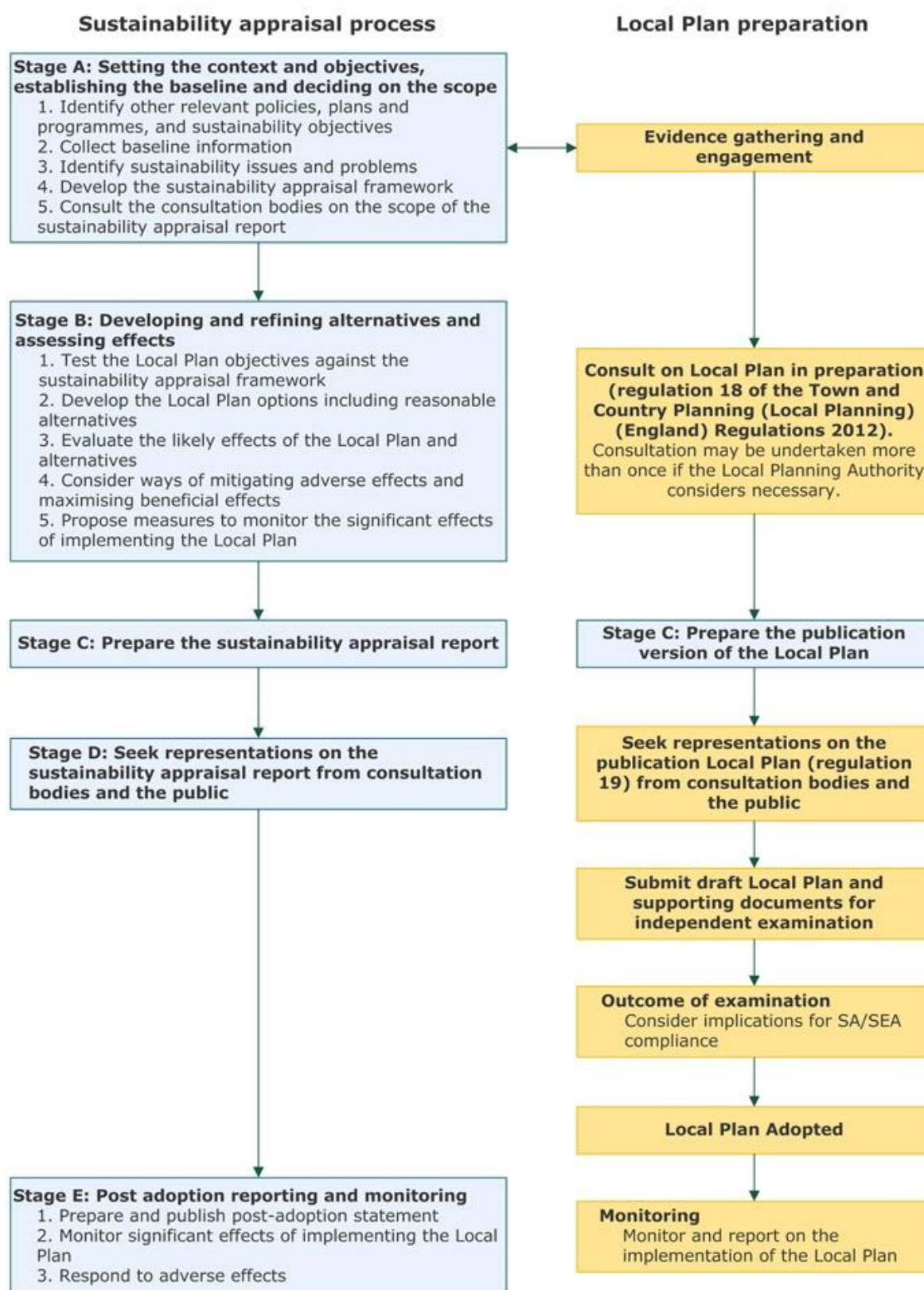


Figure 1.2: Sustainability Appraisal process as presented in national planning practice guidance¹⁴

¹⁴ Available at: <https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal>
[Date accessed: 02/11/22]

1.6 The SA process so far

1.6.1 **Figure 1.2** illustrates the different stages of SA and outputs that are planned as part of the SA of the local plan up to the Publication Stage which is presently scheduled for 2024. The green boxes indicate the position of this current report in the sequence of stages that are taking place alongside plan production.

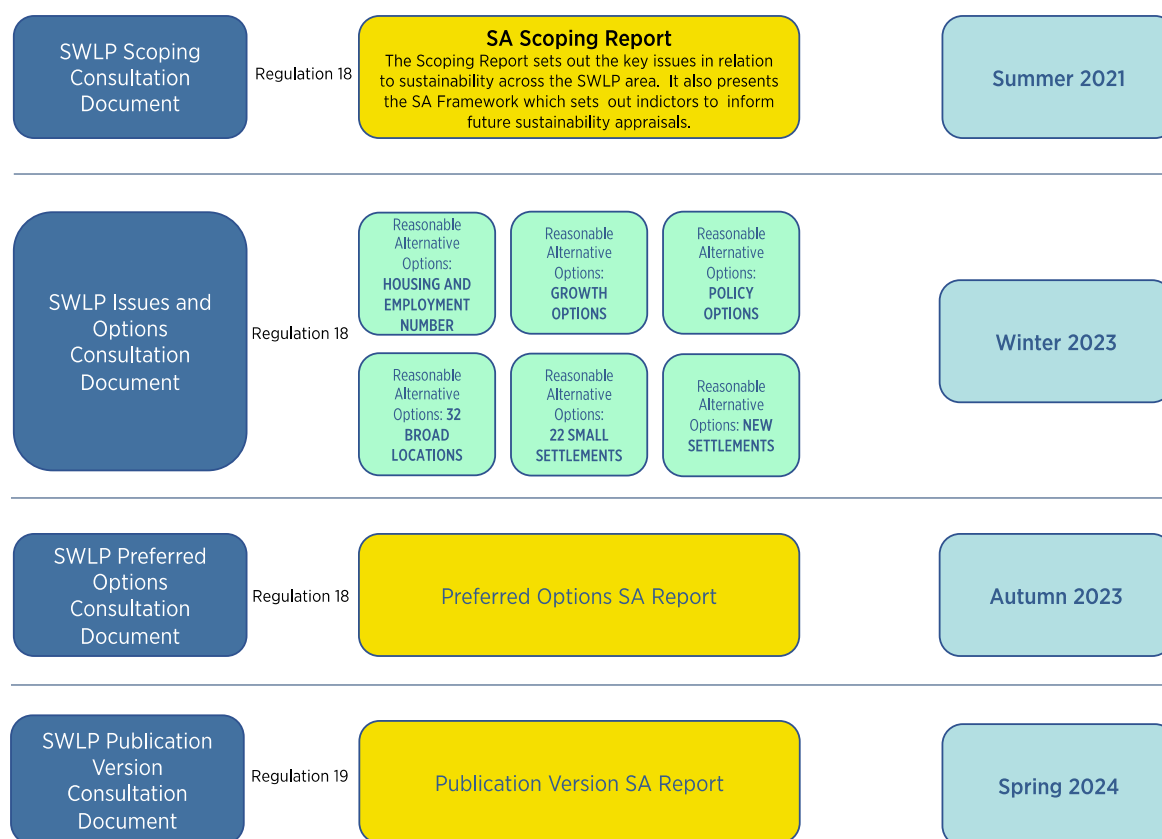


Figure 1.3: Sustainability Appraisal process embedded within the main stages of the SWLP plan making process

1.7 Scoping

1.7.1 The first stage of the process, scoping, was completed in June 2022. The scoping report specifies the scope and level of detail of the information to be included in the SA process. The SA Scoping Report represented Stage A of the SA process (see **Figure 1.2**), and presents information in relation to:

- Identifying other relevant plans, programmes and environmental protection objectives;
- Collecting baseline information;
- Identifying sustainability problems and key issues;
- The SA Framework; and
- Consultation arrangements on the scope of SA with the consultation bodies.

1.7.2 The Scoping report was consulted on with the statutory bodies: Natural England, Historic England and the Environment Agency.

- 1.7.3 The Scoping Report¹⁵ contains baseline information and should therefore be read alongside this report.

1.8 Structure of this SA Report

- 1.8.1 This document forms **Volume 2** of the Regulation 18 Issues and Options SA, which comprises the Main SA Report.

- 1.8.2 This chapter provides background information to South Warwickshire and the accompanying SA and SEA work. The remainder of this report is structured as follows:

- **Chapter 2** – Topic specific methodologies and assumptions;
- **Chapter 3** – Identification of reasonable alternatives;
- **Chapter 4** – Evaluation of the Broad Locations at the Main Settlements
- **Chapter 5** – Evaluation of the Small Settlement Locations
- **Chapter 6** – Evaluation of the New Settlement Locations
- **Chapter 7** – Evaluation of the Spatial Growth Options
- **Chapter 8** – Evaluation of the Policy Options
- **Chapter 9** – Conclusions and next steps;

- 1.8.3 **Volume 1** of the SA comprises the Non-Technical Summary of the Regulation 18 Issues and Options SA.

- 1.8.4 **Volume 3** of the SA comprises the Appendices which set out the detailed assessments that have informed the SA, as follows:

- **Appendix A** – The full SA Framework;
- **Appendix B** –Assessment information concerning environmental receptors and impact sources at the Main Settlements, expressed as Broad Locations which represent sub-areas in close proximity to the Main Settlements;
- **Appendix C** –Assessment information concerning environmental receptors and impact sources at the Small Settlement Locations;
- **Appendix D** –Assessment information concerning environmental receptors and impact sources at the New Settlement Locations; and
- **Appendix E** –Assessment of the different policy options identified in the SWLP Issues and Options Consultation Document.

¹⁵ Lepus Consulting (2022) Sustainability Appraisal of the South Warwickshire Local Plan: SA Scoping Report, June, 2022.

2 Topic specific methodologies, impact scoring index and assumptions

2.1 Introduction

2.1.1 This chapter sets out the methodology which has been used to appraise the sustainability performance of the reasonable alternatives as identified at the Issues and Options stage of Local Plan preparation.

2.2 Using the SA Framework

2.2.1 The SA Framework, which is presented in its entirety in **Appendix A**, is comprised of the following SA Objectives:

1. **Climate change:** Reduce the SWLP authorities' contribution towards the causes of climate change.
2. **Flood risk:** Plan for anticipated levels of climate change.
3. **Biodiversity and geodiversity:** Protect, enhance and manage biodiversity and geodiversity.
4. **Landscape:** Protect, enhance and manage the quality and character of landscapes and townscapes.
5. **Cultural heritage:** Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.
6. **Environmental Pollution:** Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.
7. **Natural resources:** Protect and conserve natural resources including soil, water and minerals.
8. **Waste:** Reduce waste generation and disposal and support sustainable management of waste.
9. **Housing:** Provide affordable, high quality and environmentally sound housing for all.
10. **Human Health:** Safeguard and improve community health, safety and wellbeing.
11. **Accessibility:** Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.
12. **Education:** Increase access to education and improve attainment to develop and maintain a skilled workforce.
13. **Economy:** Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.

- 2.2.2 The SA Framework is comprised of SA Objectives and decision-making criteria. Acting as yardsticks of sustainability performance, the SA Objectives are designed to represent the topics identified in Annex 1(f)¹⁶ of the SEA Directive. Including the SEA topics in the SA Objectives helps ensure that all of the environmental criteria of the SEA Directive are represented. Consequently, the SA Objectives reflect all subject areas to ensure the assessment process is transparent, robust and thorough.
- 2.2.3 It is important to note that the order of SA Objectives in the SA Framework does not infer prioritisation. The SA Objectives are at a strategic level and can potentially be open-ended. In order to focus each objective, decision making criteria are presented in the SA Framework to be used during the appraisal of policies and sites.
- 2.2.4 The receptors considered for each SA Objective have been determined with consideration of the environmental baseline set out in the Scoping Report. The topic-specific methodologies set out in **Tables 2.2 – 2.14** below summarise the nature and level of impact anticipated on the identified receptors.

Table 2.1: Presenting likely impacts

Likely Impact	Description	Impact Symbol
Major Positive Impact	The proposed option contributes to the achievement of the SA Objective to a significant extent.	++
Minor Positive Impact	The proposed option contributes to the achievement of the SA Objective to some extent.	+
Negligible Impact	The proposed option has no effect or an insignificant effect on the achievement of the SA Objective.	0
Uncertain Impact	The proposed option has an uncertain relationship with the SA Objective or insufficient information is available for an appraisal to be made.	+/-
Minor Adverse Impact	The proposed option prevents the achievement of the SA Objective to some extent. Mitigation solutions are achievable, and or complex, with a relatively low level of intervention.	-
Major Adverse Impact	The proposed option prevents the achievement of the SA Objective to a significant extent. Mitigation solutions are likely to be complex, if at all possible. A high level of intervention is required.	--

2.3 Describing effects

- 2.3.1 The SEA process requires that the likely significance of effects is determined. It also necessitates that the characteristics of the effects are articulated in the reporting process and that reports make reference to, amongst other matters listed in Annex II of the SEA Directive (see **Box 1.1**):
- the probability, duration, frequency and reversibility of the effects;
 - the cumulative nature of the effects; and
 - the transboundary nature of the effects.

¹⁶ Annex 1(f) identifies: 'the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors'.

Box 2.1: *Annex II of the SEA Directive*¹⁷

Criteria for determining the likely significance of effects (Article 3(5) of SEA Directive)

The characteristics of plans and programmes, having regard, in particular, to:

- the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources;
- the degree to which the plan or programme influences other plans and programmes including those in a hierarchy;
- the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development;
- environmental problems relevant to the plan or programme; and
- the relevance of the plan or programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste management or water protection).

Characteristics of the effects and of the area likely to be affected, having regard, in particular, to:

- the probability, duration, frequency and reversibility of the effects;
- the cumulative nature of the effects;
- the transboundary nature of the effects;
- the risks to human health or the environment (e.g. due to accidents);
- the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
- the value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage;
 - exceeded environmental quality standards or limit values;
 - intensive land-use; and
- the effects on areas or landscapes which have a recognised national, Community or international protection status.

2.3.2 The following topic methodologies (see **section 2.4 – 2.16**) refer to how different environmental and human receptors are likely to be affected by the reasonable alternatives. All locational reasonable alternatives concern residential development proposals; only the Spatial Growth Options consider employment locations as well as residential development.

2.3.3 Topic-specific methodologies have been established which reflect the differences between the SA Objectives and how each receptor should be considered in the appraisal process.

¹⁷ EU Council (2001) Directive 2001/42/EC of the European Parliament and of the Council. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0042&from=EN> [Date accessed: 20/01/20]

2.4 Climate Change (SA Objective 1)

2.4.1 **Table 2.2** sets out the proposed methodology to appraise the reasonable alternatives options against SA Objective 1: Climate change.

Table 2.2: SA Objective 1: Climate change assessment methodology

Score	Likely impact on carbon emissions
--	Residential-led development which could potentially result in an increase in CO ₂ emissions by 1% or more in comparison to current levels.
-	Residential-led development which could potentially result in an increase in CO ₂ emissions by 0.1% or more in comparison to current levels.
0	Development would be expected to result in a negligible increase in CO ₂ emissions.
+/-	Non-residential development where the carbon emissions produced as a result of the proposed development is uncertain or insufficient information is available.
+	Development proposals which include energy saving or renewable energy technologies. Development proposals which would reduce reliance on personal car use, encourage active travel or the use of public transport.

Notes

Figures calculated using UK local authority CO₂ emissions data¹⁸ and the number of people per dwelling¹⁹, such that proposals for the following housing numbers are expected to increase carbon emissions by 1% or more in comparison to the current estimates:

- Stratford on Avon DC – 625 dwellings;
- Warwick DC – 1,287 dwellings.

Proposals for the following housing numbers are expected to increase carbon emissions by 0.1% or more in comparison to current estimates:

- Stratford on Avon DC – 63 dwellings;
- Warwick DC – 129 dwellings.

2.4.2 The increase in GHG emissions caused by development proposals are associated with impacts of the construction phase, the occupation and operation of homes and businesses, energy and water consumption and increases in local road transport with associated emissions. This impact is considered to be permanent and non-reversible.

2.4.3 The incorporation of green infrastructure within developments presents several opportunities to mitigate climate change, for example, through providing natural cooling to combat the 'urban heat island' effect, reducing the effects of air pollution and providing more pleasant outdoor environments to encourage active travel²⁰.

2.4.4 However, it is assumed that development on previously undeveloped or greenfield land would result in an increase in GHG emissions due to the increase in the local population and the number of operating businesses and occupied homes.

¹⁸ Department for Business, Energy & Industrial Strategy (2020) UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2018. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2018> [Date accessed: 13/07/22]

¹⁹ People per Dwelling has been calculated using the population estimates (Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>) and dwellings stock (Available at: <https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants>)

²⁰ TCPA (2007) The essential role of green infrastructure: eco-towns green infrastructure worksheet. Available at: <https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=dd06b21d-6d41-4c4e-bec5-4f29a192f0c6> [Date accessed: 14/12/20]

- 2.4.5 One potential method to estimate GHG emissions would be based on per capita calculations, using the UK local authority emissions statistics which is published by the Government annually²¹, based on the average number of people per dwelling and the proposed number of dwellings for new development sites. See **Table 2.2** for per capita information in the two districts.
- 2.4.6 Large scale residential-led development of up to 2,000 homes at the BLs, and 6,000 homes at the New Settlements, is likely to increase GHG emissions in the Plan area by more than 1% and exacerbate climate change effects in the future. Development at all SSLs could deliver between 50 – 500 dwellings and could therefore increase carbon emissions in the Plan area by more than 0.1% and exacerbate climate change effects in the future.
- 2.4.7 The 1% principle is limited and only a coarse precautionary indicator.
- 2.4.8 It should be noted that the appraisal of the reasonable alternatives is limited in its assessment of carbon emissions. Further detail on climate change in the Plan area will be available later in the plan making process. A climate change study is currently being undertaken in support of the SWLP Review. This will analyse in more detail the performance of growth options in relation to climate change. Specific carbon footprint data for the plan area would enable the SA process to evaluate changes to carbon emissions as a consequence of the plan in terms of (a) evolution of the baseline without the plan, and (b) effect on climate change through increased or decreased emissions, with the plan.
- 2.4.9 The development of greenfield sites for housing has the potential to lead to local, long term significant adverse effects in the form of increased flooding, drought and storm events. Cumulative effects are possible at national and global scale.
- 2.4.10 Sites proposed for employment or non-residential end use may present further negative effects on climate change; however, this would be dependent on the site-specific proposals and the nature of development, which is unknown at the time of assessment. Conversely, where renewable energy generation is incorporated within development, or proposed employment development locations would reduce commuting distances, potential adverse impacts could be offset, to some extent.
- 2.4.11 In terms of mitigation potential, the locational reasonable alternatives at all scales have been identified with the intention of supporting 20-minute neighbourhoods and reducing the need to travel to meet daily needs, seeking to reduce transport-related GHG emissions. Future policies in the SWLP will seek to reduce GHG emissions associated with the construction and operation of homes. The incorporation of GI into the any future proposals has the potential to retain soils and vegetation in these areas and introduce additional planting that would help to adapt the development to the risks of future climate change.
- 2.4.12 At this stage of SWLP preparation, the Councils have identified a number of approaches which seek to mitigate greenhouse gas (GHG) emissions and adapt to the increased risks associated with climate change²². More information is required to fully understand the likely benefits of these policies. Where possible local plan policies should seek to:

²¹ DBEIS (2021) UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2019. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2019> [Date accessed: 17/08/22]

²² South Warwickshire Local Plan Stage 1: Scoping and Call for Sites (May 2021) Available at <https://www.southwarwickshire.org.uk/doc/210268/name/J25287%20South%20Warwickshire%20Local%20Plan%202021%20WEB.pdf> [Date accessed 30/06/22]

- Reduce and limit GHG emissions from domestic and industrial/commercial sources
- Promote energy generation/use from renewable or low-carbon sources
- Develop in sustainable proximity to public transport links
- Encourage active travel to local services and amenities
- Incorporate GI measures to reduce overheating in summer, such as publicly accessible green space and tree planting to support urban cooling
- Facilitate implementation of adaptive techniques in building design e.g. passive heating/cooling.

2.4.13 To be effective, policies should be accompanied by metrics which will enable the success of the policies to be measured in a transparent and effective manner. Work is well underway with this as part of the Low Carbon South Warwickshire 2030 initiative²³.

2.5 Flood Risk (SA Objective 2)

2.5.1 **Table 2.3** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 2: Flood risk.

Table 2.3: SA Objective 2: Flood risk assessment methodology

Scoring	Likely Impact- Fluvial Flooding
--	More than 50% of the BL coincides with Flood Zones 2 and/or 3.
-	Less than 50% and more than 10% of the BL coincides with Flood Zones 2 or 3.
0	Less than 10% of the BL coincides with Flood Zones 2 or 3.
+	Development proposals which are located wholly within Flood Zone 1 or which have less than 1% FZ1 or FZ2.

Notes

Based on the Environment Agency fluvial flood risk data²⁴, such that:

- Flood Zone 3: 1% - 3.3+% chance of flooding each year (with Flood Zone 3b classified as functional floodplain);
- Flood Zone 2: 0.1% - 1% chance of flooding each year; and
- Flood Zone 1: Less than 0.1% chance of flooding each year.

Scoring	Likely Impact- Surface Water Flooding
--	More than 50% of the BL coincides with areas at high risk of surface water flooding.
-	Less than 50% and more than 10% of the BL coincides with any areas at risk of surface water flooding.
0	Less than 10% of the BL coincides with areas at high risk of surface water flooding.
+	Development proposals which are not located in areas determined to be at risk of surface water flooding or which have less than 1% flood risk.

²³ https://www.warwickdc.gov.uk/info/20468/climate_change/1718/climate_change_action_programme/3 [Date accessed 30/09/22]

²⁴ Environment Agency (2013) Flood Map for Planning Risk. Available at: <https://flood-map-for-planning.service.gov.uk> [Date accessed: 14/07/22]

Notes

Based on the Environment Agency surface water flood risk data²⁵, such that:

- High risk: 3.3+% chance of flooding each year;
- Medium risk: between 1% - 3.3% chance of flooding each year; and
- Low risk: between 0.1% - 1% chance of flooding each year.

- 2.5.2 In terms of mitigation potential, the masterplanning intentions for the locational reasonable alternatives assume that a principle for 40% greenspace within the BL will be followed. Any flood risk areas present in the BL should be carefully planned and positioned to be in greenspace. This helps with SuDS provision.
- 2.5.3 The potential for negative impacts to occur as a result of the locational reasonable alternatives coinciding with Flood Zones 2 or 3 or surface water flood risk zones have been considered relative to the size of the strategic location, taking into account the potential for development to be located in Flood Zone 1.
- 2.5.4 It is assumed that development proposals will be in perpetuity and it is therefore likely that development would be subject to the impacts of flooding at some point in the future.
- 2.5.5 It is recognised that climate change may increase the risk of flooding in the future. However, it has not been possible to include any modelled data or floodplain mapping to this effect.
- 2.5.6 Plan makers should be aware that a location with 40% coincidence with FZ2 or 3 is likely to be high risk in the future; the SA scoring guide indicates that major impacts are only anticipated from 50% and above. Readers should note that the scoring system is only a guide designed to provide a mechanism for comparing locations and potential impacts at a strategic level. The plan making and SA process is iterative and it may be necessary to obtain more detail beyond this initial assessment phase.
- 2.5.7 Flood zones are defined by the Environment Agency as follows:
- Flood Zone 3: 1% or greater chance of flooding each year;
 - Flood Zone 2: Between 0.1% - 1% chance of flooding each year; and
 - Flood Zone 1: Less than 0.1% chance of flooding each year.
- 2.5.8 According to Environment Agency data²⁶, areas determined to be at high risk of surface water flooding have more than a 3.3% chance of flooding each year, medium risk between 1% and 3.3%, and low risk between 0.1% and 1% chance.

²⁵ Environment Agency (2013) Risk of flooding from surface water. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/297429/LIT_8_986_eff63d.pdf [Date accessed: 16/07/20]

²⁶ Environment Agency (2013) Risk of flooding from surface water – understanding and using the map. Available at: <https://www.gov.uk/government/publications/flood-risk-maps-for-surface-water-how-to-use-the-map> [Date accessed: 17/08/22]

2.6 Biodiversity and Geodiversity (SA Objective 3)

2.6.1 **Table 2.4** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 3: Biodiversity and geodiversity.

Table 2.4: SA Objective 3: Biodiversity and geodiversity assessment methodology

Scoring	Likely Impact- Habitats site e.g. SAC, SPA or Ramsar site
--	Development proposal coincides with, or is located in close proximity to, a Habitats site or area of functionally linked land. Likelihood of direct, permanent, irreversible impacts.
-	Development proposal is located within a recognised zone of influence (ZOI) or similar spatial catchment relative to the Habitats site. Likelihood of direct or indirect impacts.
0	Development not anticipated to result in adverse impacts on Habitats sites.
+	Development proposals which could potentially enhance features within a Habitats site.

Notes

Data for Habitats sites available from Natural England²⁷.

Scoring	Likely Impact- Site of Special Scientific Interest
--	Development coincides with, or is located adjacent to, a SSSI. Likelihood of direct, permanent, irreversible impacts.
-	Within an Impact Risk Zone (IRZ) which indicates proposed development should be consulted on with Natural England. Likelihood of direct or indirect impacts.
0	Development within an IRZ which does not indicate the proposed development needs to consult with Natural England.
+	Development proposals which would enhance a SSSI.

Notes

Data for SSSIs and IRZs are available from Natural England²⁸.

Scoring	Likely Impact- National Nature Reserve
--	Development coincides with an NNR. Likelihood of direct, permanent, irreversible impacts.
-	Development could potentially result in adverse impacts on an NNR. Likelihood of direct or indirect impacts.
0	Development not anticipated to result in adverse impacts on NNRs.
+	Development proposals which would enhance or create an NNR.

Notes

Data for NNRs available from Natural England²⁹.

Scoring	Likely Impact- Ancient Woodland
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²⁷ Natural England (2020) Natural England Open Data Geoportal. Available at: <https://naturalengland-defra.opendata.arcgis.com> [Date accessed: 16/07/20]

²⁸ Natural England (2022) Natural England's Impact Risk Zones for Sites of Special Scientific Interest, 28 May 2020. Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/sssi-impact-risk-zones-england> [Date accessed: 14/07/22]

²⁹ Natural England (2022) National Nature Reserves (England). Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/national-nature-reserves-england> [Date accessed: 14/07/22]

--	Development proposal coincides with an ancient woodland. Likelihood of direct, permanent, irreversible impacts.
-	Development proposal anticipated to result in adverse impacts on a stand of ancient woodland. Likelihood of direct or indirect impacts.
0	Development proposal would not be anticipated to impact ancient woodland.
+	Development proposals which would enhance ancient woodland.

Notes

Data for ancient woodlands available from Natural England³⁰.

Scoring	Likely Impact- Local Nature Reserve
--	Development proposal likely to result in significant adverse impacts on a local nature reserve, due to coincidence, such as likely substantial loss of the LNR. Likelihood of direct, permanent, irreversible impacts.
-	Development proposal could potentially result in adverse impacts on a LNR, such as those which coincide or are located in close proximity. Likelihood of direct or indirect impacts.
0	Development proposal not anticipated to result in adverse impacts on an LNR.
+	Development proposals which would enhance or create an LNR.

Notes

Data for LNRs available from Natural England³¹.

Scoring	Likely Impact- Local Wildlife Sites
--	Development proposal likely to result in significant adverse impacts on a local wildlife site, due to coincidence, such as likely substantial loss of the LWS. Likelihood of direct, permanent, irreversible impacts.
-	BL anticipated to result in adverse impacts on a local wildlife designation, due to being located in close proximity yet impacts can be avoided through greenspace principles for the BL. Likelihood of direct or indirect impacts.
0	Development not anticipated to result in adverse impacts on a local wildlife designation.
+	Development proposals which would enhance or create local wildlife designations.

Notes

Data for LWSs provided by the SWLP authorities.

³⁰ Natural England (2022) Ancient Woodland (England). Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/ancient-woodland-england> [Date accessed: 14/07/22]

³¹ Natural England (2022) Local Nature Reserves (England). Available at: https://naturalengland-defra.opendata.arcgis.com/datasets/b1d690ac6dd54c15bdd2d341b686ecd7_0 [Date accessed: 14/07/22]

Scoring	Likely Impact- Geological Sites
--	Development proposal anticipated to result in adverse impacts on a Regionally Important Geological Site, due to proximity of potential development. Likelihood of direct or indirect impacts.
-	Development proposal anticipated to result in adverse impacts on a local geological site, due to location or proximity. Likelihood of direct or indirect impacts.
0	Development proposal not anticipated to result in adverse impacts on a geological site
+	Development proposal anticipated to enhance a geological site.

Notes

Data for geological sites provided by the SWLP authorities.

Scoring	Likely Impact- Priority Habitats
-	Development proposal coincides with a priority habitat.
0	Development proposal does not coincide with a priority habitat.
+	Development proposals which enhance or create a priority habitat.

Notes

Data for priority habitats available from Natural England³².

2.6.2 The biodiversity and geodiversity objective considers adverse impacts of the proposed development at a landscape-scale. It focuses on an assessment of development on a network of designated and undesignated sites, wildlife corridors and individual habitats within the Plan area. These ecological receptors are listed in **Table 2.4**.

2.6.3 Where a site is coincident with, adjacent to or located in close proximity of an ecological receptor, it is assumed that negative effects associated with development will arise to some extent. These negative effects include those that occur during the construction phase and are associated with the construction process and construction vehicles (e.g. habitat loss, habitat fragmentation, habitat degradation, noise, air, water and light pollution) and those that are associated with the operation/occupation phases of development (e.g. public access associated disturbances, increases in local congestion resulting in a reduction in air quality, changes in noise levels, visual disturbance, light pollution, impacts on water levels and quality etc.).

³² Natural England (2021) Priority Habitat Inventory (England). Available at: <https://data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitat-inventory-england> [Date accessed: 13/07/22]

- 2.6.4 Habitats sites (formerly referred to as European sites) provide valuable ecological infrastructure for the protection of rare, endangered and/or vulnerable natural habitats and species of exceptional importance within Europe. These sites consist of Special Areas of Conservation (SACs), designated under European Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), and Special Protection Areas (SPAs), classified under European Directive 2009/147/EC on the conservation of wild birds (the Birds Directive). Additionally, paragraph 176 of the NPPF requires that sites listed under the Ramsar Convention (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat) are to be given the same protection as fully designated Habitats sites.
- 2.6.5 The area within which development proposals could potentially have direct, indirect and in-combination impacts on the integrity of a Habitats site is referred to as the Zone of Influence (ZOI). This is determined through an identification of sensitive receptors at each Habitats site (its qualifying features) and pathways via which the Local Plan may have an impact.
- 2.6.6 A Habitats Regulations Assessment (HRA) has been prepared to inform the Issues and Options stage of the SWLP preparation process. This has identified a number of Habitats sites which may be affected by development set out in the SWLP. Pathways of impact identified include change to water quality, recreational effects and impacts upon areas of functionally linked land (watercourses used by migratory species of fish). As the HRA report has identified potential likely significant effects, the next stage in the HRA process will be an Appropriate Assessment.
- 2.6.7 Natural England has developed Impact Risk Zones (IRZs) for each SSSI unit in the country. IRZs are a Geographical Information System (GIS) tool which allow a rapid initial assessment of the potential risks posed by development proposals to SSSIs, SACs, SPAs and Ramsar sites. They define zones around each designated site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts³³. IRZs have been used to inform the SA process.
- 2.6.8 For the purposes of this assessment, impacts on priority habitats protected under the 2006 NERC Act³⁴ have been considered in the context of Natural England's publicly available Priority Habitat Inventory database³⁵. It is acknowledged this may not reflect current local site conditions in all instances.
- 2.6.9 It is assumed that development proposals located on previously undeveloped greenfield land would result in a net reduction in vegetation cover in the Plan area. Proposals which result in the loss of greenfield land are expected to contribute towards a cumulative loss in vegetation cover. This would also be expected to lead to greater levels of fragmentation and isolation for the wider ecological network, due to the loss of stepping-stones and corridors. This will restrict the ability of ecological receptors to adapt to the effects of climate change.

³³ Natural England (2022) Natural England's Impact Risk Zones for Sites of Special Scientific Interest, 31 July 2022. Available at: <https://data.gov.uk/dataset/5ae2af0c-1363-4d40-9d1a-e5a1381449f8/sssi-impact-risk-zones> [Date accessed: 17/08/22]

³⁴ Natural Environment and Rural Communities Act 2006. Available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents> [Date accessed: 17/08/22]

³⁵ Natural England (2022) Priority Habitat Inventory (England). Available at: <https://data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitat-inventory-england> [Date accessed: 17/08/22]

- 2.6.10 Protected species survey information has not been used to inform the SA since consistent information collected and assembled on a contemporary and equal basis has not been possible at the time of writing. It is a high level assessment and detail of this nature is more likely to be accessed through planning applications after the plan has been adopted.
- 2.6.11 It is acknowledged that data is available from the local biological records centre. However, it is noted that this data may be under recorded in certain areas. This under recording does not imply species absence. As a consequence, consideration of this data on a site-by-site basis within this assessment would have the potential to skew results – favouring well recorded areas of the Plan area. As such impacts on protected species have not been assessed on a site-by-site basis.
- 2.6.12 It is anticipated that the Councils will require detailed ecological surveys and assessments to accompany future planning applications. Such surveys will determine on a site-by-site basis the presence of priority species and priority habitats protected under the NERC Act and other protected species.
- 2.6.13 It is assumed that the loss of biodiversity assets, such as ancient woodland or an area of priority habitat, are permanent and irreversible effects. It is assumed that mature trees and hedgerows will be retained where possible.
- 2.6.14 It should be noted that no detailed ecological surveys have been completed by Lepus to inform the assessments made in this report. However, extended Phase 1 habitats surveys would be helpful later in the plan making process once preferred options have been identified.
- 2.6.15 In terms of mitigation potential, the masterplanning intentions for the New Settlements, Broad Locations and Small Settlement Locations assume that a principle for 40% greenspace within the BL will be followed. Any biodiversity receptors in the BL should be carefully planned and positioned to be in greenspace. This should help provide good scope for design solutions that deliver design led mitigation that can avoid and reduce impacts on biodiversity.
- 2.6.16 As per para 175 of the NPPF they should also consider how the feature in question will contribute to the local nature recovery network and take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- 2.6.17 The spatial dataset for priority habitats does not include every possible habitat that might be present at a location. For example, it does not include hedgerows or veteran trees.

2.7 Landscape (SA Objective 4)

- 2.7.1 **Table 2.5** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 4: Landscape.

Table 2.5: SA Objective 4: Landscape assessment methodology

Score	Likely Impact- Cotswolds AONB (National Landscape)
--	Development is located within or proximate to the AONB; likely significant adverse impact on the character and special qualities of the AONB.
-	Development proposals which could potentially alter views experienced of or from the AONB and/or alter its setting.

Score	Likely Impact- Cotswolds AONB (National Landscape)
0	Development proposals are not located in close proximity to the AONB, or the nature of development is determined not to affect the character or setting of the AONB.
+	Development proposals which would increase the understanding and enjoyment of the special qualities of the Cotswolds AONB.

Notes

Data available from Natural England³⁶.

Further information and specific objectives for the AONB are available within the Cotswolds AONB Management Plan 2018-2023³⁷.

Scoring	Likely Impact- Landscape Characterisation Assessment
-	Development proposals which could potentially be discordant with the character areas, guidelines and characteristics as set out in the 1993 Warwickshire Landscape Guidelines.
0	Development proposals unlikely to be discordant with the character areas, guidelines and characteristics as set out in the 1993 Warwickshire Landscape Guidelines.
+	Development proposals which would protect or enhance features identified in the 1993 Warwickshire Landscape Guidelines.

Notes

Warwickshire Landscape Guidelines 1993 and National Character Area profiles.³⁸

Scoring	Likely Impact- Landscape Sensitivity (SoADC only)
--	Development coincides substantially with areas of 'high' or 'high-medium' sensitivity as identified in the SoADC Landscape Sensitivity Analysis.
-	Development coincides with less than 50% high or high-medium sensitivity, and includes areas of 'medium' or 'medium-low' sensitivity as identified in the Landscape Sensitivity Analysis.
0	Development proposals located within areas of 'low' sensitivity as identified in the Landscape Sensitivity Analysis.
+	Development proposals which would protect or enhance features of the landscape as identified within the Landscape Sensitivity Analysis.

³⁶ Natural England (2020) Areas of Outstanding Natural Beauty (England). Available at: <https://data.gov.uk/dataset/8e3ae3b9-a827-47f1-b025-f08527a4e84e/areas-of-outstanding-natural-beauty-england> [Date accessed: 13/07/22]

³⁷ Cotswolds Conservation Board (2018) Cotswolds AONB Management Plan 2018-2023. Available at: <http://www.cotswoldsaonb.org.uk/planning/cotswolds-aonb-management-plan/> [Date accessed: 16/07/22]

³⁸ Natural England (2014) National Character Area Profiles. Available at: <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles> [Date accessed: 14/07/22]

Notes

Landscape Sensitivity Assessment of Local Service Villages³⁹

Landscape Sensitivity Assessment of Main Settlements including Areas of Restraint Assessment⁴⁰

Landscape Sensitivity, Ecological and Geological Study⁴¹

Area of restraint designations in the Stratford Core Strategy

Scoring Likely Impact- Special Landscape Areas

--	Development proposals located inside the SLA which directly affect the majority of the SLA.
-	Development proposals located inside of very close to the SLA which directly affect part of the SLA not greater than 50%.
0	Development proposals not located anywhere close to an SLA e.g. beyond the visual envelope of the SLA.
+	Development proposals which would protect or enhance features of the SLA.

Notes

Special Landscape Areas are defined in the 2016 Stratford Core Strategy. Special Landscape Areas are a Stratford designation only.

Scoring Likely Impact- Country Park

--	Development proposals located inside the CP which directly affect the majority of the CP.
-	Development proposals located in close proximity CP which directly affect the landscape qualities of the CP.
0	Development proposals not located anywhere close to a CP e.g. beyond the visual envelope of the CP.
+	Development proposals which would protect or enhance features of the CP.

Notes

PRoW data provided by the SWLP authorities.

Views have been identified through the use of aerial photography and Google Maps.

³⁹ White Consultants (2012) 'Landscape Sensitivity Assessment of Local Service Villages' Available at <https://www.stratford.gov.uk/planning-building/landscape-and-green-infrastructure.cfm> [Date accessed 14/07/22]

⁴⁰ White Consultants (2011) 'Landscape Sensitivity Assessment of Main Settlements including Areas of Restraint Assessment' Available at <https://www.stratford.gov.uk/planning-building/landscape-and-green-infrastructure.cfm> [Date accessed 14/07/22]

⁴¹ WCC (2013) Landscape Sensitivity, Ecological and Geomorphological Study' Available at https://www.warwickdc.gov.uk/downloads/file/1549/appendix_7_-_landscape_sensitivity_and_ecological_and_geological_study [Date accessed 14/07/22]

Scoring	Likely Impact- Views from the PRoW Network
-	Development proposals which may alter views of a predominantly rural or countryside landscape experienced by users of the PRoW network.
0	Development proposals are not considered to significantly alter views experienced by users of the PRoW network.
+	Development proposals which could potentially improve the views experienced from the nearby PRoW network.

Notes

PRoW data provided by the SWLP authorities.

Views have been identified through the use of aerial photography and Google Maps.

Scoring	Likely Impact- Coalescence
-	Development proposals which are considered to reduce the separation between existing settlements and increase the risk of the coalescence of settlements.
0	Development proposals are not considered to significantly reduce the separation between existing settlements and increase the risk of the coalescence of settlements.

Notes

Potential impacts determined through use of aerial photography and Google Maps.

- 2.7.2 Impacts on landscape are often determined by the specific layout and design of development proposals, as well as the site-specific landscape circumstances, as experienced on the ground. Detailed designs for each development proposal are uncertain at this stage of the assessment. This assessment comprises a desk-based exercise which has not been verified in the field. Therefore, the nature of the potential impacts on the landscape are, to an extent, uncertain. There is a risk of negative effects occurring, some of which may be unavoidable. As such, this risk has been reflected in the assessment as a negative impact where a development proposal is located in close proximity to sensitive landscape receptors. The level of impact has been assessed based on the nature and value of, and proximity to, the landscape receptor in question.
- 2.7.3 All datasets that have been used to inform the SA are presented in **Table 2.5**. There is no consideration of the Green Belt designation as part of the SA process as the Councils have taken a 'policy-off' approach and recognize that the SA process strategically evaluates the effects of development at greenfield locations by looking at a much wider range of variables than the purposes of Green Belt designation.
- 2.7.4 In order to consider potential visual effects of development, it has been assumed that the development proposals would, broadly, reflect the character of nearby development of the same type. Potential views from residential properties are identified using aerial photography.
- 2.7.5 It is anticipated that the Councils will require developers to undertake Landscape and Visual Impact Assessments (LVIAs) or Landscape and Visual Appraisals (LVAs) to accompany any future proposals, where relevant. The LVIAs or LVAs should seek to provide greater detail in relation to the landscape character of the proposal and its surroundings, the views available towards the development proposal, the character of those views and the sensitivity and value of the relevant landscape and visual receptors.

- 2.7.6 Large scale residential-led development is likely to impact the countryside and urban edge environs where the various reasonable alternative development locations are located. All BLs are likely to lead to some form of landscape impact depending on the nature of the receptor as some are more sensitive than others.
- 2.7.7 In terms of mitigation potential, the masterplanning intentions for the New Settlement Locations, Broad Locations and Small Settlement Locations assume that a principle for 40% greenspace within the BL will be followed. This should help provide good scope for design solutions that deliver design led mitigation that can avoid and reduce impacts on changing character and views.
- 2.7.8 It is recognised and recommended that landscape sensitivity and capacity studies would be helpful later in the plan making process once preferred options have been identified.

2.8 Cultural Heritage (SA Objective 5)

- 2.8.1 **Table 2.6** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 5: Cultural heritage.

Table 2.6: SA Objective 5: Cultural heritage assessment methodology

Scoring	Likely Impact- Grade II* Listed Buildings
--	Development proposal coincides with, is located adjacent to, or could significantly impact the setting of, a Grade I Listed Building.
-	Development proposal located within the wider setting of a Grade I Listed Building.
0	Development proposal is not considered likely to affect the setting or character of a Grade I Listed Building.
+	Development proposals which could potentially enhance a Grade I Listed Building or its setting.

Notes	
Grade I Listed Buildings are considered to be those of exceptional interest.	
Data for heritage assets ⁴² , including the Heritage at Risk Register ⁴³ , available from Historic England.	

Scoring	Likely Impact- Grade II* Listed Buildings
--	Development proposal coincides with, or could significantly impact the setting of, a Grade II* Listed Building.
-	Development proposal located within the setting of a Grade II* Listed Building.
0	Development proposal not considered likely to impact a Grade II* Listed Building or its setting.
+	Development proposals which could potentially enhance a Grade II* Listed Building or its setting.

Notes	
Grade II* Listed Buildings are considered to be those of more than special interest.	
Data sourced from Historic England as above.	

⁴² Historic England (2022) Download Listing Data. Available at: <https://historicengland.org.uk/listing/the-list/data-downloads/> [Date accessed: 13/07/22]

⁴³ Historic England (2022) Search the Heritage at Risk Register. Available at: <https://historicengland.org.uk/advice/heritage-at-risk/search-register/> [Date accessed: 13/07/22]

Scoring	Likely Impact- Grade II Listed Buildings
--	Development proposal coincides with, or could significantly impact the setting of, a Grade II Listed Building.
-	Development proposal located within the setting of a Grade II Listed Building.
0	Development proposal not considered likely to impact a Grade II Listed Building or its setting.
+	Development proposals which could potentially enhance a Grade II Listed Building or its setting.

Notes

Grade II Listed Buildings are considered to be those of special interest.

Data sourced from Historic England as above.

Scoring	Likely Impact- Scheduled Monuments
--	Development proposal coincides with a SM.
-	Development proposal located within the setting of a SM.
0	Development proposal not considered to impact a SM or its setting.
+	Development proposals which could potentially enhance a Scheduled Monument or its setting.

Notes

Scheduling is the selection of a sample of nationally important archaeological sites.

Data sourced from Historic England as above.

Scoring	Likely Impact- Registered Parks and Gardens & Registered Battlefields
--	Development proposal coincides with an RPG or Registered Battlefield or substantially alters setting of the feature.
-	Development proposal located within the setting of an RPG or Registered Battlefield.
0	Development proposal not considered likely to impact an RPG / RB or its setting.
+	Development proposals which could potentially enhance an RPG / RB or its setting.

Notes

The main purpose of the Register is to celebrate designed landscapes of note and encourage appropriate protection.

Data sourced from Historic England as above.

Scoring	Likely Impact- Conservation Areas
-	Development proposal located within a Conservation Area or considered to be located within the setting of a Conservation Area.
0	Development proposal not considered to impact a Conservation Area or its setting.
+	Development proposals which could potentially enhance a Conservation Area.

Notes

Conservation Area data provided by the SWLP authorities.

Scoring	Likely Impact- Local Archaeological Record Site
-	Development proposal coincides with an archaeological site.
0	Development proposal does not coincide with an archaeological site.
+	Development proposals which could potentially enhance an archaeological site.

Notes

No data available – Jo's Heritage Report for ESCC will be helpful.

- 2.8.2 A Heritage and Settlement Sensitivity Assessment has been undertaken for the plan area which will provide specialist evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of reasonable alternatives at this stage of the SA process.
- 2.8.3 Impacts on heritage assets will be largely determined by the specific layout and design of development proposals, as well as the nature and significance of the heritage asset. At this stage, the risk of substantial harm to the significance of a heritage asset has been assessed based on the nature and significance of, and proximity to, the heritage asset in question.
- 2.8.4 Adverse impacts are recorded for options which have the potential to have an adverse impact on sensitive heritage designations, including Listed Buildings, Scheduled Monuments (SM), Registered Parks and Gardens (RPG) and Conservation Areas.
- 2.8.5 It is assumed that where a designated heritage asset coincides with a development proposal, the designated heritage asset will not be lost as a result of development (unless otherwise specified by the Councils). Adverse impacts on heritage assets are predominantly associated with impacts on the existing setting of the asset and the character of the local area, as well as adverse impacts on views of, or from, the asset. These negative impacts are expected to be long-term and irreversible.
- 2.8.6 Development proposals which would be discordant with the local character or setting, for example due to design, layout, scale or type, would be expected to adversely impact the setting of nearby heritage assets that are important components of the local area. Views of, or from, the heritage asset are considered as part of the assessment of potential impacts on the setting of the asset.
- 2.8.7 Heritage features identified on Historic England's Heritage at Risk Register may be identified as being at risk for a number of reasons, for example, due to dilapidation of the building fabric or other sources of risk such as coastal erosion, cultivation or scrub encroachment⁴⁴. Where Heritage at Risk assets could potentially be affected by the proposed development, this has been stated.

⁴⁴ Historic England Heritage at Risk Register. Available at: <https://historicengland.org.uk/advice/heritage-at-risk/search-register> [Date accessed: 16/08/22]

- 2.8.8 It is anticipated that the Councils will require a Heritage Statement or Archaeological Desk-Based Assessment to be prepared to accompany future planning applications, where appropriate. The Heritage Statement should describe the significance of any heritage assets affected by the proposals, including any contribution made by their settings.
- 2.8.9 All SA findings have been informed by desktop analysis using the datasets listed in **Table 2.6**. It is recognised and recommended that evaluation of historic environment features at preferred options stage of the plan making would be helpful.
- 2.8.10 All assessments of different strategic reasonable alternative development options have included an assumption that development will include 40% greenspace as part of any development allocation. Any heritage receptors in the development location should be carefully planned and positioned to be in greenspace. This should help provide good scope for design solutions that deliver design led mitigation that can avoid and reduce impacts on heritage.
- 2.9 Environmental Pollution (SA Objective 6)**
- 2.9.1 **Table 2.7** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 6: Environmental Pollution.

Table 2.7: SA Objective 6: Environmental pollution assessment methodology

Scoring	Likely Impact : AQMA
-	Development proposal coincides or is located within 200m of an AQMA.
0	Development proposal is located over 200m from an AQMA.

Notes
UK AQMA data available from Defra ⁴⁵ .
A 200m buffer distance from AQMAs has been used, in line with the DfT guidance ⁴⁶ .

Scoring	Likely Impact : Main Roads
-	Development proposal is located within 200m of a main road.
0	Development proposal is located over 200m from a main road.
+	Development proposals which would help to reduce the number of cars used, promote the use of public transport and active travel and reduce congestion on nearby roads.

⁴⁵ Department for Environment Food and Rural Affairs (2022) UK Air Information Resource. Available at: <https://uk-air.defra.gov.uk/aqma/maps/> [Date accessed: 13/07/22]

⁴⁶ Department for Transport (2022) TAG unit A3 Environmental Impact Appraisal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf [Date accessed: 13/07/22]

Notes

Road data available from the Ordnance Survey⁴⁷.

A 200m buffer distance from main roads (motorways and A-roads) has been used, in line with the DfT guidance⁴⁸.

Scoring	Likely Impact : Railway Line
-	Development proposals located within 200m of a Railway Line.
0	Development proposals located over 200m from a Railway Line.
+	Development proposals which would help to reduce the pressure on railway lines, by promoting the use of other public transport and active travel.

Notes

Road data available from the Ordnance Survey⁴⁹.

A precautionary 200m buffer distance from railway lines has been used.

Scoring	Likely Impact : Water quality/ Watercourses
-	Development proposals located within 200m of a watercourse.
0	Development proposals located over 200m from a watercourse.
+	Development proposal includes integration of green infrastructure or the naturalization of watercourses.

Notes

Watercourse mapping data available from the Ordnance Survey⁵⁰.

Scoring	Likely Impact : Groundwater Source Protection Zone (SPZ)
-	Development proposal coincides with a groundwater SPZ.
0	Development proposal does not coincide with a groundwater SPZ.

⁴⁷ Ordnance Survey (2022) OS Open Roads. Available at: <https://www.ordnancesurvey.co.uk/business-government/products/open-map-roads> [Date accessed: 13/07/20]

⁴⁸ Department for Transport (2022) TAG unit A3 Environmental Impact Appraisal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf [Date accessed: 13/07/22]

⁴⁹ Ordnance Survey (2022) OS Open Roads. Available at: <https://www.ordnancesurvey.co.uk/business-government/products/open-map-roads> [Date accessed: 13/07/20]

⁵⁰ Ordnance Survey (2020) OS Open Rivers. Available at: <https://www.ordnancesurvey.co.uk/business-government/products/open-map-rivers> [Date accessed: 13/07/22]

Notes

SPZ data available from the Environment Agency⁵¹. Groundwater source catchments are divided into three zones⁵²:

- Inner Zone (Zone I) – 50-day travel time from any point below the water table to the source;
- Outer Zone (Zone II) – 400-day travel time; and
- Total Catchment (Zone III) – within which all groundwater recharge is presumed to be discharged at the source.

- 2.9.2 It is assumed that development proposals would result in an increase in traffic and thus traffic-related air pollution. Both existing and future site end users would be exposed to this change in air quality. At this stage of assessment, residential capacity at each site is unknown, and as such, it is uncertain the extent to which each development proposal could potentially increase air pollution in the local area.
- 2.9.3 Exposure of new residents to air pollution has been considered in the context of the proposal location in relation to established Air Quality Management Areas (AQMAs) and main roads. It is widely accepted that the effects of air pollution from road transport decreases with distance from the source of pollution i.e. the road carriageway. The Department for Transport (DfT) in their Transport Analysis Guidance (TAG) consider that, *“beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant”*⁵³. This statement is supported by Highways England and Natural England based on evidence presented in a number of research papers^{54 55}. A buffer distance of 200m has therefore been applied in this assessment. A proposed site which lies wholly or partially within an AQMA or a 200m buffer, as described above, is assessed as having potential negative effects on new residents.
- 2.9.4 The proximity of a proposal in relation to a main road determines the exposure level of site end users to road related air and noise emissions⁵⁶. In line with the DMRB guidance, it is assumed that site end users would be most vulnerable to these impacts within 200m of a main road. This distance has therefore been applied throughout this assessment to both existing road and rail sources. A proposed site which lies wholly or partially within a 200m buffer, as described above, is assessed as having potential negative effects on new residents.

⁵¹ Environment Agency (2022) Source Protection Zones. Available at: <https://data.gov.uk/dataset/09889a48-0439-4bbe-8f2a-87bba26fbbf5/source-protection-zones-merged> [Date accessed: 13/07/22]

⁵² Environment Agency (2019) Groundwater source protection zones. Available at: <https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs> [Date accessed: 13/07/22]

⁵³ Department for Transport (2017) TAG unit A3 Environmental Impact Appraisal. Available at: <https://www.gov.uk/government/publications/webtag-tag-unit-a3-environmental-impact-appraisal-december-2015> [Date accessed: 16/08/22]

⁵⁴ Bignal, K., Ashmore, M & Power, S. 2004. The ecological effects of diffuse air pollution from road transport. English Nature Research Report No. 580, Peterborough.

⁵⁵ Ricardo-AEA, 2016. The ecological effects of air pollution from road transport: an updated review. Natural England Commissioned Report No. 199.

⁵⁶ Design Manual for Roads and Bridges, Volume 11: Environmental Assessment, Section 3: Environmental Assessment Techniques, Part 1: Air Quality, Annex D2: Road Type. Available at: <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20707.pdf> [Date accessed: 16/08/22]

- 2.9.5 The vulnerability of groundwater to pollution is determined by the physical, chemical and biological properties of the soil and rocks, which control the ease with which an unprotected hazard can affect groundwater. Groundwater Source Protection Zones (SPZs) indicate the risk to groundwater supplies from potentially polluting activities and accidental releases of pollutants. As such, any proposal that is located within a groundwater SPZ could potentially have an adverse impact on groundwater sources⁵⁷.
- 2.9.6 Construction activities in or near watercourses have the potential to cause pollution, impact upon the bed and banks of watercourses and impact upon the quality of the water⁵⁸. In this assessment, a 200m buffer zone was deemed appropriate. An approximate 10m buffer zone from a watercourse should be used in which no works, clearance, storage or run-off should be permitted⁵⁹.
- 2.9.7 The assessment of impacts associated with development upon watercourse focuses on surface water run-off only. It is acknowledged that all development set out in the SWLP will in-combination increase the volume of water for treatment at Waste Water Treatment Works (WwTWs). This has the potential to lead to a deterioration in water quality if the correct infrastructure is not put in place. Under the WFD, the quality of water within a watercourse must not deteriorate from its current WFD classification (either as an overall watercourse or for individual elements assessed). In addition, given the potential for Functionally Linked Land to be present within the SWLP area, development must not undermine the ability of watercourses to meet Good Ecological Status. This will be secured through WwTW upgrades where necessary by the relevant water company to meet the scale of development set out in the SWLP, combined with strong SWLP policy wording in respect of water quality and water efficiency. It may also be necessary for developers to consider providing additional measures to protect water quality, on a voluntary basis. In addition, opportunities to implement natural flood management techniques to achieve multiple benefits in respect of flood risk, water quality and habitat creation could be explored.
- 2.9.8 The pollution indicators include receptors and sources of pollution that might affect future levels of environmental pollution. The distances are estimates to assist with the aim of flagging up issues for consideration in more detail later in the plan making process.
- 2.9.9 In terms of mitigation potential, it is assumed that all locational reasonable alternatives will have 40% greenspace within each option. This should help provide good scope for design solutions that deliver design led mitigation that can avoid and reduce exacerbating pollution risk.
- 2.9.10 Residential-led development is likely to result in an increase in air pollution, to some extent, for example through increased local traffic. Large scale and medium scale options (6,000 and 2,000 homes respectively) could potentially result in a significant increase in local air pollution. Small scale options for between 50 – 500 dwellings could also potentially increase local air pollution. Air quality pollution could also lead to cumulative effects.

⁵⁷ Environment Agency (2019) Groundwater source protection zones (SPZs). Available at: <https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs> [Date accessed: 17/08/22]

⁵⁸ World Health Organisation (1996) Water Quality Monitoring - A Practical Guide to the Design and Implementation of Freshwater Quality Studies and Monitoring Programmes: Chapter 2 – Water Quality. Available at: https://www.who.int/water_sanitation_health/resourcesquality/wqmchap2.pdf [Date accessed: 15/11/19]

⁵⁹ Department for Environment Food and Rural Affairs (2019) Advice and Information for planning approval on land which is of nature conservation value. Available at: <https://www.daera-ni.gov.uk/articles/advice-and-information-planning-approval-land-which-nature-conservation-value> [Date accessed: 17/08/22]

- 2.9.11 In terms of mitigation potential, the locational reasonable alternatives have been identified with the intention of supporting 20-minute neighbourhoods and reducing the need to travel to meet daily needs. Future policies are likely to require more detailed assessments of impacts on air pollution from development proposals. Design measures could include green infrastructure solutions as well as clean energy initiatives including electric cars. These measures are unlikely to reduce the impact to negligible in the short term.

2.10 Natural Resources (SA Objective 7)

- 2.10.1 **Table 2.8** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 7: Natural resources.

Table 2.8: SA Objective 7: Natural resources assessment methodology

Scoring	Likely Impact : Agricultural Land Classification
--	Development proposal includes an area of land over 20ha of Grade 1, 2 or 3 ALC land. Permanent and irreversible effects are likely.
-	Development proposal includes an area of land less than 20ha of Grade 1, 2 or 3 ALC land. Permanent and irreversible effects are likely.
0	Development proposals which are situated on poor quality agricultural land: Grade 4 and 5 ALC land.
+	Development proposals which are situated on land classified as 'urban' or 'non-agricultural'.

Notes

ALC data available from Natural England⁶⁰. Where Grade 3 data is not sub-divided into 3a or 3b, it is assumed that 3a is present.

A 20ha threshold for BMV land has been used based on Natural England guidance⁶¹.

Development proposals which are situated on previously developed land will not be assessed under ALC.

Scoring	Likely Impact : Mineral Safeguarding Areas
-	Development proposal coincides with an MSA.
0	Development proposal does not coincide with an MSA.
+	Development proposals for the extraction of mineral resources.

Notes

Data provided by SWLP authorities.

- 2.10.2 In accordance with the core planning principles of the NPPF⁶², development on previously developed land will be recognised as an efficient use of land.

⁶⁰ Natural England (2019) Agricultural Land Classification (ALC) (England). Available at: https://naturalengland-defra.opendata.arcgis.com/datasets/5d2477d8d04b41d4bbc9a8742f858f4d_0?geometry=-3.131%2C52.513%2C-0.667%2C53.094 [Date accessed: 13/07/22]

⁶¹ Natural England (2019) Agricultural Land Classification: protecting the best and most versatile agricultural land. Available at: <http://publications.naturalengland.org.uk/publication/35012> [Date accessed: 13/07/22]

⁶² Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Date accessed: 16/08/22]

- 2.10.3 Development proposals on previously undeveloped land are expected to pose a threat to the soil resource within the proposal perimeter due to excavation, soil compaction, erosion and an increased risk of soil pollution and contamination during the construction phase. This is expected to be a permanent and irreversible impact.
- 2.10.4 In addition, proposals which would result in the loss of greenfield land would be expected to contribute towards a cumulative loss of ecological habitat. This would be expected to lead to greater levels of habitat fragmentation and isolation for the local ecological network restricting the ability of ecological receptors to adapt to the effects of climate change. The loss of greenfield land has therefore been considered to have an adverse effect. See also SA Objective 3: Biodiversity and Geodiversity.
- 2.10.5 The Agricultural Land Classification (ALC) system classifies land into five categories according to versatility and suitability for growing crops. The top three grades, Grades 1, 2 and Subgrade 3a, are referred to as the 'best and most versatile' (BMV) land⁶³. Where site-specific ALC studies have not been completed, it is not possible to identify Subgrade 3a and 3b land. Therefore, a precautionary approach is taken, and potential BMV land is assessed as Grades 1, 2 and 3.
- 2.10.6 Adverse impacts are expected for options which would result in a net loss of agriculturally valuable soils or which lead to the sterilisation of valuable mineral deposits, as identified through the designation of Mineral Safeguarding Areas.
- 2.11 **Waste (SA Objective 8)**
- 2.11.1 **Table 2.9** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 8: Waste.

Table 2.9: SA Objective 8: Waste assessment methodology

Scoring	Likely Impact : Waste
--	Residential-led development which could potentially result in an increase in household waste generation by 1% or more in comparison to current levels.
-	Residential-led development which could potentially result in an increase in household waste generation by 0.1% or more in comparison to current levels.
0	Development would be expected to result in a negligible increase in household waste generation.
+/-	The waste generated as a result of development proposals for non-residential use is uncertain or insufficient information is available.
+	Development proposals include provision of waste and recycling storage.
++	Development proposals are for waste or recycling facilities.

⁶³ MAFF. October 1988. Available at Natural England.
<http://publications.naturalengland.org.uk/publication/6257050620264448?category=5954148537204736> [Date accessed: 16/08/22]

Notes

Figures calculated using UK local authority waste data⁶⁴ and the number of people per dwelling⁶⁵, such that proposals for the following housing numbers are expected to increase household waste generation by 1% or more in comparison to the current estimates:

- Stratford-on-Avon – 750 dwellings; and
- Warwick – 675 dwellings.

Proposals for the following housing numbers are expected to increase household waste generation by 0.1% or more in comparison to current estimates:

- Stratford-on-Avon – 75 dwellings; and
- Warwick – 68 dwellings

- 2.11.2 One potential method to estimate household waste production would be based on per capita calculations, using the UK local authority statistics which is published by the Government annually⁶⁶, based on the average number of people per dwelling and the proposed number of dwellings for new development sites. See **Table 2.9**.
- 2.11.3 Large and medium scale residential-led development is likely to increase waste. Any of the BLs could deliver up to 2,000 dwellings and could increase waste in the Plan area by more than 1%. The SSLs could deliver approximately 50 – 500 dwellings and could therefore also increase waste in the Plan area by 1%. The 1% principle is limited and only a coarse precautionary indicator. It applies to all BLs and SSLs and is only a guideline. All sites perform in the same way and will lead to significant increases in waste.
- 2.11.4 In terms of mitigation potential, the locational reasonable alternatives have been identified with the intention of supporting 20-minute neighbourhoods with the aim of reducing the need to travel to meet daily needs, seeking to reduce transport-related GHG emissions.
- 2.11.5 Waste policies are complex as they relate, in part, to behavioural solutions. The Warwickshire Waste Plan is the mechanism for managing and reducing waste and can include policies which will seek to:
- Minimise household waste generation;
 - Minimise industrial/commercial waste generation including construction; and
 - Maximise rates of recycling and composting.
- 2.11.6 To be effective, policies should be accompanied by metrics which will enable to success of the policies to be measured in a transparent and effective manner. All sites perform in the same way and will lead to significant increases in waste.

⁶⁴ Department for Environment, Food and Rural Affairs (2022) Local Authority Collected Waste Statistics. Available at: <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables> [Date accessed: 16/07/20]

⁶⁵ People per Dwelling has been calculated using the population estimates (Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>) and dwellings stock (Available at: <https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants>)

⁶⁶ Department for Environment Food and rural Affairs (2021) Statistics on waste managed by local authorities in England in 2020/21. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1040756/Statistics_on_waste_managed_by_local_authorities_in_England_in_2020_v2rev_accessible.pdf [Date accessed: 17/08/22]

2.12 Housing (SA Objective 9)

2.12.1 **Table 2.10** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 9: Housing.

Table 2.10: SA Objective 9: Housing assessment methodology

Scoring	Likely Impact : Provision of Housing
--	Development proposal will result in a significant net decrease in housing (of 10 dwellings or more).
-	Development proposal will result in a minor net decrease in housing (of between one and 9 dwellings).
0	Development proposals would not impact housing provision.
+/-	It is uncertain whether the proposed development would result in a net change in housing provision or insufficient information is available.
+	Development proposals resulting in a minor net gain in housing (of between one and 99 dwellings).
++	Development proposals resulting in a significant net gain in housing (of 100 dwellings or more).

Notes

Need to explain the 20 settlements per hectare assumption we have used – should it be here or in the explanations elsewhere?

- 2.12.2 The Councils have prepared evidence documents in relation to the housing needs in South Warwickshire over the Plan period. Development proposals are assessed for the extent to which they will help to meet the diverse needs of current and future residents of the Plan area.
- 2.12.3 Under this objective, development proposals which would result in an increase of 99 dwellings or less would usually be assessed as having a minor positive impact on the local housing provision. Development proposals which would result in an increase of 100 dwellings or more would be likely to have a major positive impact on the local housing provision.
- 2.12.4 The provision of high quality affordable housing, alongside appropriate facilities, is important to the creation of sustainable communities in relation to health and wellbeing impacts and the opportunity to have good quality, affordable accommodation. Lack of affordable accommodation, can lead to those people in lower skilled jobs living further from their places of employment and therefore lead to greater levels of commuting and travel. At this stage of plan-making, it is assumed that all residential-led development options will help provide affordable, high quality housing that meets the range of accommodation needs identified for the community, including affordable, student and specialist housing as well as self and custom build housing.

2.13 Health (SA Objective 10)

2.13.1 **Table 2.11** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 10: Health.

Table 2.11: SA Objective 10: Health assessment methodology

Scoring	Likely Impact : NHS Hospital with A&E Department
-	Development proposal is located over 5km from an NHS hospital providing an A&E service.
+	Part of the development proposal is located within 5km from an NHS hospital providing an A&E service.
++	The majority of the development proposal is coincident with the 5km from an NHS hospital providing an A&E service.

Notes

NHS hospital department data available from the NHS website⁶⁷.

Target distance of 5km to an NHS hospital with and A&E service in line with Barton et al. sustainable distances⁶⁸.

Scoring	Likely Impact : Access to GP Surgery
-	The development proposal is located over 800m from a GP surgery.
+	Part of the development proposal is coincident with an GP 800m zone.
++	The majority of the development proposal is coincident with a GP surgery.

Notes

Target distance of 800m to a GP surgery in line with Barton et al. sustainable distances.

Scoring	Likely Impact : Access to Leisure Facilities
-	Development proposal is located over 1500m from a Leisure Facility.
+	Development proposal is located partially within the target distance of 1500m from a Leisure Facility.
++	The majority of the BL is located within the target distance of 1500m from a Leisure Facility.

Notes

Target distance of 1.5km to a leisure facility in line with Barton et al. sustainable distances.

Leisure facilities include council owned leisure centres and other sports facilities which are open to the public.

Scoring	Likely Impact : AQMA
-	Development proposal coincides with or is located within 200m of an AQMA.
0	Development proposal is located over 200m from an AQMA.

⁶⁷ NHS (2022) NHS hospitals overview. Available at: <https://www.nhs.uk/service-search/other-services/Accident-and-emergency-services/LocationSearch/428> [Date accessed: 14/07/22]

⁶⁸ Barton, H., Grant. M. & Guise. R. (2010) Shaping Neighbourhoods: For local health and global sustainability, January 2010

Notes

UK AQMA data available from Defra⁶⁹.

A 200m buffer distance from AQMAs has been used, in line with the DfT guidance⁷⁰.

Scoring

Likely Impact : Main Roads

-

Development proposal is located within 200m of a main road.

0

Development proposal is located over 200m from a main road.

Notes

Road data available from the Ordnance Survey⁷¹.

A 200m buffer distance from main roads (motorways and A-roads) has been used, in line with the Department for Transport guidance⁷².

Scoring

Likely Impact : Access to Greenspace

-

Development proposal is located over 800m from a public greenspace, local green space.

+

Development proposal is partially located within 800m of a public greenspace, local green space.

++

The majority of the development proposal is within 800m of a public greenspace, local green space.

Notes

Data for Country Parks available from Natural England⁷³. Data for public greenspaces available from Ordnance Survey⁷⁴.

Target distance of 800m to a public greenspace in line with SWLP authorities' methodology for '20-minute neighbourhoods'.

Scoring

Likely Impact : Provision of Housing

-

Development proposal is located over 600m from a PRoW / Cycle Path.

+

Development proposal is located within 600m of a PRoW / Cycle Path.

⁶⁹ Department for Environment Food and Rural Affairs (2022) UK Air Information Resource. Available at: <https://uk-air.defra.gov.uk/aqma/maps/> [Date accessed: 14/07/22]

⁷⁰ Department for Transport (2022) TAG unit A3 Environmental Impact Appraisal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf [Date accessed: 14/07/22]

⁷¹ Ordnance Survey (2022) OS Open Roads. Available at: <https://www.ordnancesurvey.co.uk/business-government/products/open-map-roads> [Date accessed: 14/07/22]

⁷² Department for Transport (2022) TAG unit A3 Environmental Impact Appraisal. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf [Date accessed: 14/07/22]

⁷³ Natural England (2018) Country Parks (England). Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/country-parks-england> [Date accessed: 16/07/20]

⁷⁴ Ordnance Survey (2018) OS Open Greenspace. Available at: <https://www.ordnancesurvey.co.uk/business-government/products/open-map-greenspace> [Date accessed: 16/07/20]

- 2.13.2 It is assumed that development proposals located in close proximity to main roads would expose site end users to transport associated noise and air pollution. In line with the DMRB guidance, it is assumed that receptors would be most vulnerable to these impacts located within 200m of a main road⁷⁵. Negative impacts on the long-term health of residents is anticipated where residents will be exposed to air pollution.
- 2.13.3 AQMAs are considered to be an area where the national air quality objective will not be met. Site end users exposed to poor air quality associated with AQMAs would be expected to have adverse impacts on health and wellbeing.
- 2.13.4 In order to facilitate healthy and active lifestyles for existing and new residents, it is expected that the SWLP should seek to ensure that residents have access to NHS hospitals, GP surgeries and leisure centres. Sustainable distances to each of these necessary services are derived from Barton *et al.*⁷⁶.
- 2.13.5 For the purposes of this assessment, accessibility to a hospital has been taken as proximity to an NHS hospital with an A&E service. Distances of proposals to other NHS facilities (e.g. community hospitals and treatment centres i.e. Warwick University Health Centre) or private hospitals has not been taken into consideration in this assessment.
- 2.13.6 Access to leisure centres can provide local residents with opportunities to facilitate healthy lifestyles through exercise. New development proposals have been assessed in terms of their access to the local PRoW networks and greenspace. In line with Barton *et al.*⁷⁷, a sustainable distance of 600m has been used for the assessments.
- 2.13.7 All assessments of different strategic reasonable alternative development options have included an assumption that development will include 40% greenspace as part of any development allocation.

2.14 Accessibility (SA Objective 11)

- 2.14.1 **Table 3.12** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 12: Transport.

Table 2.12: SA Objective 11: Accessibility assessment methodology

Scoring	Likely Impact : Bus Stop
-	Development proposals are located over 400m from a bus stop or within 400m of a bus stop with irregular services.
+	Development proposals are partially located within 400m of a bus stop providing regular services.
++	The majority of the development proposal is within 400m of a bus stop providing regular services.

⁷⁵ Design Manual for Roads and Bridges, Volume 11: Environmental Assessment, Section 3: Environmental Assessment Techniques, Part 1: Air Quality, Annex D2: Road Type. Available at: <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20707.pdf> [Date accessed: 17/08/22]

⁷⁶ Barton, H., Grant. M. & Guise. R. (2010) Shaping Neighbourhoods: For local health and global sustainability, January 2010

⁷⁷ Barton, H., Grant. M. & Guise. R. (2010) Shaping Neighbourhoods: For local health and global sustainability, January 2010-

Notes

Bus stop data available from SWLP authorities.

Target distance of 400m to a bus stop in line with Barton et al. sustainable distances⁷⁸.

Scoring Likely Impact : Railway Station

-	Development proposal is located over 2km from a national network railway station.
+	Development proposal is partially located within 2km of a national network railway station.
++	The majority of the development proposal is within 2km of a national network railway station.

Notes

National network railway station data available from SWLP authorities.

Target distance of 2km to a railway station in line with Barton et al. sustainable distances.

Scoring Likely Impact : Food Stores

-	Development proposal is located over 800m from a food store.
+	Development proposal is located within 800m of a food store.

Notes

Food store locations are data available from google maps. The assessment includes local food stores and supermarkets.

Target distance of 800m to a food store in line with SWLP authorities' methodology for '20-minute neighborhoods', seeking to reduce the need for daily trips by private car.

Scoring Likely Impact : Connectivity

--	Development proposal is located in an area identified to have very poor connectivity (Grade E)
-	Development proposal is located in an area identified to have poor connectivity (Grade D)
0	Development proposal is located in an area identified to have moderate connectivity (Grade C)
+	Development proposal is located in an area identified to have good connectivity (Grade B)
++	Development proposal is located in an area identified to have excellent connectivity (Grade A)

⁷⁸ Barton, H., Grant. M. & Guise. R. (2010) Shaping Neighbourhoods: For local health and global sustainability, January 2010

Notes

Methodology in line with the SWLP authorities' connectivity work in the 'South Warwickshire Settlement Analysis'⁷⁹, which assesses presence of active travel and existing road network links, and any 'barriers', in relation to the locations.

Note: data was not available for some Broad Locations and one Small Settlement.

We are assessing by the lowest level of connectivity in the Small Settlement.

Unless that area is very small so the impact would be negligible.

2.14.2 The Councils' settlement analysis project explored connectivity and accessibility:

- 1) Connectivity – the physical connectivity of the existing street pattern, and any physical barriers which limit route/connection options. This has implications for the legibility of places, character of the place, the activity and perceived safety along some routes, though these are not explicitly addressed by this study.
- 2) Accessibility – this element largely focusses on proximity/distance to key facilities, services, as distance is a key factor in modal choice.

2.14.3 The Councils evaluated a range of settlement locations based on how they matched the spatial characteristics of the seven growth options originally identified in the 2021 SWLP Issues and Option Scoping Consultation document. The findings have been used to evaluate connectivity.

2.14.4 In line with Barton *et al.*'s sustainable distances, site end users should be situated within 2km of a railway station and 400m of a bus stop offering a frequent service. Consideration has been given to the proportion of a development proposal within the target distance of these transport options.

2.14.5 Bus service frequency and destination information has been obtained from Google Maps^{80,81}. To be sustainable, the bus stop should provide users with hourly services.

2.14.6 Development proposals have been assessed in terms of their access to the surrounding footpath network. Access should be safe, where site end users would not have to cross roads where there are no pedestrian crossings.

2.14.7 Development proposals have been assessed in terms of their existing access to the surrounding road network. Where a development proposal is currently not directly linked to the road network, it is assumed that road infrastructure will need to be incorporated into the proposed development.

2.15 Education (SA Objective 12)

2.15.1 **Table 2.13** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 13: Education.

Table 2.13: SA Objective 12: Education assessment methodology

Scoring	Likely Impact : Primary School
-	Residential development proposal is located over 800m from a primary school.

⁷⁹ South Warwickshire Councils (2022) 'South Warwickshire Settlement Analysis'

⁸⁰ Google Maps (no date) Available at: <https://www.google.co.uk/maps>

⁸¹ Live departure boards available from Google Maps have been used to assess the frequency of services at bus stops within the Plan area. These are obtained from local bus timetables.

0	Development proposal is located for non-residential use.
+	Residential development proposals are located within 800m of a primary school.

Notes

Primary school data provided by the SWLP authorities.

Target distance of 800m to a primary school in line with Barton et al. sustainable distances⁸².

Scoring	Likely Impact : Secondary School
-	Residential development proposal is located over 1.5km from a secondary school.
0	Development proposals for non-residential use.
+	Residential development proposals are located within 1.5km of a secondary school.

Notes

Secondary school data provided by the SWLP authorities.

Target distance of 1.5km to a secondary school in line with Barton et al. sustainable distances.

Scoring	Likely Impact : Further Education
+	Residential development proposals are located within 5km of a further education facility providing education for 16-18-year old, including 'Sixth Forms' and Colleges.

Notes

Further education data provided by the SWLP authorities.

Target distance of 5km to further education in line with Barton et al. sustainable distances.

- 2.15.2 It is assumed that new residents in the Plan area require access to primary and secondary education services to help facilitate good levels of education, skills and qualifications of residents.
- 2.15.3 In line with Barton *et al.*'s sustainable distances⁸³, for the purpose of this assessment, 800m is assumed to be the target distance for travelling to a primary school and 1.5km to a secondary school. All schools identified are publicly accessible state schools.
- 2.15.4 The law requires all young people in England to continue in education or training until at least their 18th birthday, even if they work. The assessment of tertiary, or further, education considers access to educational institutions which offer post-secondary school educational opportunities. This category can include 'Six Forms' and colleges. Access to tertiary educational institutions has been assessed using a 5km search zone.
- 2.15.5 Access to universities has not been considered at this stage.

⁸² Barton, H., Grant. M. & Guise. R. (2010) Shaping Neighbourhoods: For local health and global sustainability, January 2010

⁸³ Ibid.

2.16 Economy (SA Objective 13)

2.16.1 **Table 2.14** sets out the proposed methodology to appraise the reasonable alternatives against SA Objective 14: Economy.

Table 2.14: SA Objective 13: Economy assessment methodology

Scoring	Likely Impact : Employment Opportunities
-	Residential development proposals are located over 5km from a key employment location.
0	Development proposals for non-residential use.
+	Residential development proposals are located within 5km of a key employment location.

Notes

Information on key employment sites provided by the SWLP authorities.

Scoring	Likely Impact : Employment Floorspace
--	Development proposals which result in a significant net decrease in employment floorspace (over 1,000sqm).
-	Development proposals which result in a minor net decrease in employment floorspace (between one and 999sqm).
0	Development proposals would not impact employment floorspace.
+/-	It is uncertain whether the proposed development would result in a net change in employment floorspace or insufficient information is available.
+	Development proposals which result in a minor net increase in employment floorspace (between one and 999sqm).
++	Development proposals which result in a significant net increase in employment floorspace (over 1,000sqm).

Notes

Assessment of current land use made through reference to aerial photography and Google Maps⁸⁴.

Thresholds identified in the Town and Country Planning (Development Management Procedure) (England) Order 2015.

⁸⁴ Google Maps (2020) Available at: <https://www.google.co.uk/maps> [Date accessed: 16/07/20]

2.17 Potential for mitigation

2.17.1 The evaluation of all locational reasonable alternatives (see **Appendices B-D**) has included consideration of ways in which identified adverse effects might be mitigated using the principles of the mitigation hierarchy which seeks the following prioritisation of mitigation interventions.

Table 2.15: *Summary of the mitigation hierarchy*

A	Avoid	Avoid impacts where possible.	<i>Achievable</i>
M	Mitigate	To reduce the level of impacts. This may serve to reduce significant impacts to minor or negligible.	<i>Challenging</i>
C	Compensate	Compensation should be used as a last resort.	<i>Complex</i>
X	Not possible	Likely irreversible effects.	
-	Not required	No adverse effects identified.	

2.18 Identifying the best performing option

2.18.1 The evaluation of sustainability performance using the SA Framework is necessarily high level and reflects the strategic nature of SEA. During the evaluation, where possible, a best performing option has been identified. The main caveat to this process is that the so-called best performing option is best performing in the context of available data that has informed the desktop assessment. Primary data obtained through site visits or new datasets that become available during the SA process may shed a different light on the performance of a particular reasonable alternative and to this end, the best performing options should all be interpreted with a strategic perspective. Identification of best performing options should help inform the selection of preferred options. It is possible that consultation exercises and primary data may enable a more detailed and accurate evaluation of the option at a later stage in the plan making process. Likewise, there are other considerations beyond the SA that will shape the plan and the subsequent preferred options.

2.19 Selection and rejection of reasonable alternatives

2.19.1 This report does not include any information about selection or rejection of reasonable alternatives.

3 Identification of reasonable alternatives

3.1 The Issues and Options Consultation Document

3.1.1 The Issues and Options consultation is the second stage in preparing the South Warwickshire Local Plan which is a new Plan for Stratford-on-Avon and Warwick District, following the Scoping and Call for Sites consultation in 2021. As the name suggests, it is a stage in the plan making that identifies the alternative ways of preparing the plan so that it can best reflect the strategic objectives centred around five overarching principles which will underpin the Plan:

- A climate resilient and net zero carbon South Warwickshire
- A well-designed and beautiful South Warwickshire
- A healthy, safe and inclusive South Warwickshire
- A well-connected South Warwickshire
- A biodiverse and environmentally resilient South Warwickshire.

3.2 The 20-minute Neighbourhood Concept

3.2.1 The Councils' have been considering the opportunity presented by the preparation of the Local Plan to create more compact and complete communities, where people have access to a good range of facilities to meet daily needs within easy walking or cycling distance. By reducing the need to travel by private car to meet daily needs, walkable communities have the potential to have reduced transport-related GHG emissions and as well as having health benefits for people undertaking active travel. Various distances can be used to define walkable neighbourhoods. 800m direct distance, measured as the crow flies, is considered to represent a journey by walking equivalent to 10 minutes each way⁸⁵.

3.3 Assessment of reasonable alternatives

3.3.1 Article 5(1) of the SEA Directive states that *"Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I"*.

3.3.2 PPG Paragraph: 018 Reference ID: 11-018-20140306 states that *"Reasonable alternatives are the different realistic options considered by the plan-maker in developing the policies in its plan. They must be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made. The development and appraisal of proposals in plans needs to be an iterative process, with the proposals being revised to take account of the appraisal findings"*.

3.4 Different reasonable alternatives

3.4.1 Different types of Reasonable Alternatives (RA) are possible and can be prepared for housing number, spatial options, site allocations and policies.

⁸⁵ TCPA (2021) The 20 Minute Neighbourhood TCPA. Available at <https://tcpa.org.uk/collection/the-20-minute-neighbourhood/> [Date accessed 21/09/22]

3.4.2 The key aspects that the SA and plan making process will need to consider in respect to RA are as follows:

- What reasonable alternatives have been identified and on what basis?
- How they have been assessed and compared (including consideration of sustainability issues)?
- What are the preferred alternatives and why they are preferred over other alternatives?

3.4.3 The RPTI have produced best practice guidance on 'SEA and Improving the effectiveness and efficiency of SEA/SA for land use plans'⁸⁶. This recommends a sequential approach to assessing RAs as set out in **Figure 1.4**.

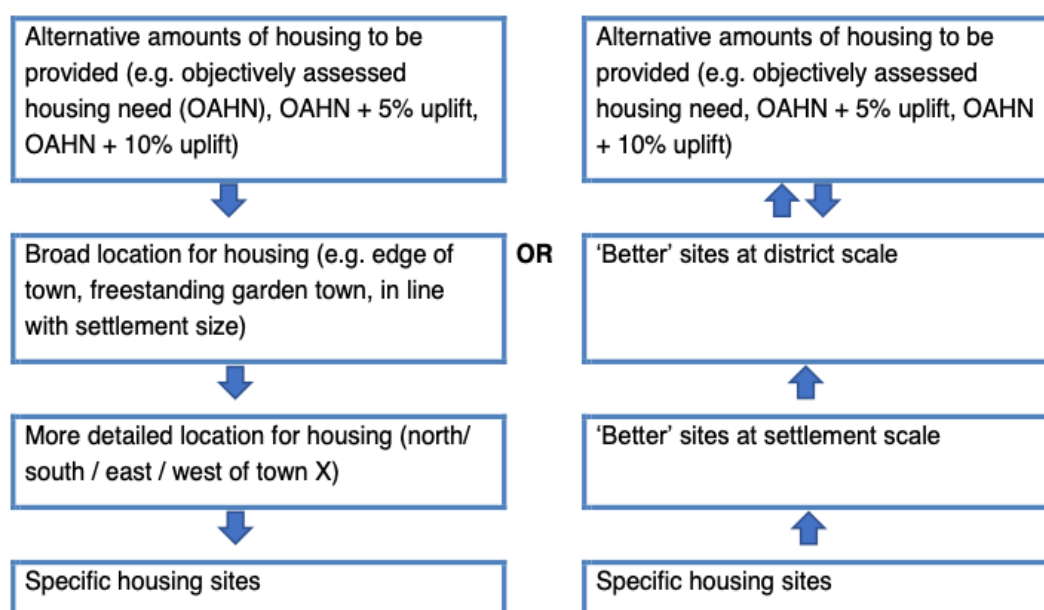


Figure 3.1: Suggested ways of sequencing of reasonable alternatives by RTPI [Source: RTPI]

3.4.4 The Councils have followed the approach set out on the left-hand side of **Figure 3.1** for both housing and employment growth. Details of the alternatives assessed, and their comparative performance against different SA objectives, have been evaluated through the SA process.

3.4.5 Reasonable alternatives to be addressed in this wider sustainability appraisal of the SWLP include those presented in **Figure 1.3**:

- Growth Options x 5
- Main Settlements expressed through Broad Locations x 32
- Smaller Settlement Locations x 22
- New Settlements x 7
- Policy Options x 116

⁸⁶ Royal Town Planning Institute (January 2018). Strategic Environmental Assessment -Improving the effectiveness and efficiency of SEA/SA for land use plans. Available at <https://www.rtpi.org.uk/research/2018/january/strategic-environmental-assessment-seasa-for-land-use-plans/> [Accessed 14/04/21]

3.4.6 **Figure 3.2** illustrates the Councils' rationale behind the different types of reasonable alternative that are included in the Issues and Options Consultation Document. This suite of reasonable alternatives represents a range of scales that can be reviewed as part of the plan making process. It is not exhaustive as there are other settlements in the plan area that have not been identified during this round of consultation. **Chapter 4** presents information about the methodology which has been used to evaluate the sustainability performance of each reasonable alternative.

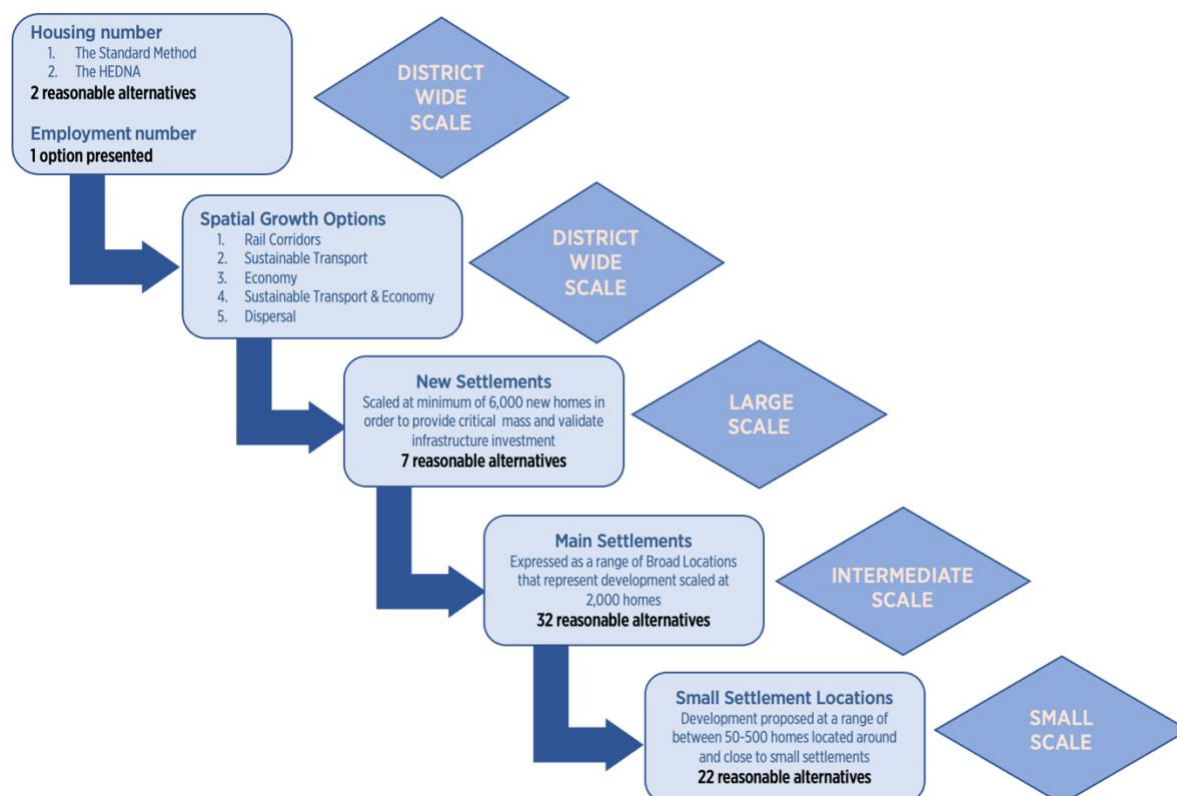


Figure 3.2: Different scales of reasonable alternative options. Together they include different reasonable alternatives that can be configured to supply the preferred options for the plan, the next stage of the plan making process

3.5 Initial identification of settlements

3.5.1 As part of their South Warwickshire Settlement Analysis⁸⁷, the Councils have initially identified a range of different settlements that approximately correlate with those Spatial Options that received support through responses received in relation to the first stage of SWLP Issues and Options Consultation (2021). The list included 30 settlements. The SA process has sought to apply the different development scales presented in **Figure 3.2** so that the Councils' list of settlements could be logically divided into locations that might be able to deliver up to 2,000 homes, which have been identified as Broad Locations within the Main Settlements, as well as smaller locations that might be able to deliver 50-500 homes. Settlements identified in **bold font** indicate main settlements.

⁸⁷ Stratford-on-Avon and Warwick District Councils (June 2022) 'South Warwickshire Settlement Analysis'

3.5.2 The Councils list is presented as

- **Alcester**
- Barford
- Bearley
- Bidford-on-Avon
- Bishops Tachbrook
- Claverdon
- Earlswood
- Hampton Magna
- Hatton Park
- Hatton Station
- Henley-in-Arden
- **Kenilworth**
- Kineton
- Kingswood (Lapworth)
- **Leamington, Warwick, Whitnash** and Cubbington⁸⁸
- Long Itchington
- Radford Semele
- Salford Priors
- **Shipston-on-Stour**
- South of Coventry
- **Southam**
- **Stratford-on-Avon**
- Studley
- Wellesbourne
- Wilmcote
- Wood End
- Wootton Wawen.

3.6 Methodology to identify reasonable alternative Broad Locations at the Main Settlements

- 3.6.1 In order to identify reasonable alternative development options that could be located near to existing services in the main settlements, and hence be more likely to deliver 20 minute neighbourhood principles, as well as deliver up to 2,000 homes as part of a single strategic allocation, the Main Settlements that are listed in **paragraph 3.5.2** have been divided into Broad Locations. This has been done on the basis that the main settlements were all sufficiently large that they could each have three or more Broad Locations associated with them. All BLs were identified using the methodology and criteria presented in **Figure 3.3**.

⁸⁸ As the route structures of these four individual settlements are intrinsically linked through coalescence, for the purpose of considering 'connectivity' and 'accessibility', they have been analysed together. Given the scale of the area studied across these four settlements, this is broken down into the following map areas within this document: Cubbington and North Leamington, Leamington Central, Leamington South, Warwick North, Warwick South, and Whitnash.

-
- 3.6.2 The presence of primary constraints including flood risk led to the exclusion of certain land parcels from the identification process. The BLs were then generally derived using cardinal points (as this gave a 4-point factor for division). As can be seen, larger locations like Kenilworth, Royal Leamington Spa and Stratford required further sub-division beyond four BLs.
- 3.6.3 This process lead to the identification of 32 BLs at the following main settlements:
- Alcester (x3)
 - Kenilworth (x6)
 - Royal Leamington Spa and Whitnash (x7)
 - Shipston-on-Stour (x4)
 - Southam (x4)
 - Stratford-upon-Avon (x5)
 - Warwick (x3)
- 3.6.4 For purposes which favour geographic convenience the main change Lepus made to the list to the list in **paragraph 3.5.2**, is that Whitnash has been presented as part of the Royal Leamington Spa cluster of Broad Locations. Likewise, Warwick and Leamington Spa are separate Main Settlements and Cubbington is a small settlement location. All BLs are presented in **Figure 4.1**.

IDENTIFYING REASONABLE ALTERNATIVE BROAD LOCATIONS

In accordance with generic 20 minute neighbourhood principles, which vary according to different of guidance, the BL boundary is based on a review of service provision. An area of search based on 800m from the of at least one of the following services associated with the main settlement has been used to define BL approximate 800m zone boundary:

- public transport access point, (train station or bus station);
 - GP surgery;
 - primary school;
 - local shop; and/or
 - publicly accessible green space.
- Where the 800m zone splits a land parcel, such as a field or woodland, the parcel is rejected if more than 50% of the land parcel lies outside of the 800m zone.
 - Where the 800m zone splits a land parcel, such as a field or woodland, the parcel is rejected if more than 50% of the land parcel coincides with a primary constraint including Flood Zones 2 or 3, AONB, ALC Grade 1, Scheduled Monuments, SSSI, Registered Parks and Gardens and ancient woodland.

The Broad Locations seek to accommodate up to 2,000 homes at 35 dwelling per hectare (dph). 35dph is considered a reasonable average housing density to inform the identification of potential locations for housing development in different types of locations and does not indicate a dph to be used in the masterplanning of future development sites. Housing to green space for green infrastructure should operate on a ratio of 60:40 of the total area. In other words, at least 40% of the land area should be planned for green infrastructure.

Figure 3.3: Procedure for identifying reasonable alternative Broad Locations

3.7 Methodology to identify Small Settlement Locations

- 3.7.1 To provide an alternative scale of development, the Councils identified 22 small settlement locations, not an exhaustive list, which fitted a number of criteria relating to accessibility and position in the settlement hierarchy. The Councils asked the SA team to identify locations around the small settlements that would be able to possibly accommodate 50-500 houses and help ensure the locations lend themselves to meeting the principles of 20-minute neighbourhoods. Being smaller and lacking some of the infrastructure associated with larger 20 minute neighbourhoods, it is accepted that the overall scale would be smaller than a typical 20 minute neighbourhood that might be found in a town or a city. For this reason, a 400m search zone was used to help identify the Small Settlement Locations. **Figure 3.4** presents the process that was followed to identify the small settlement locations.

IDENTIFYING REASONABLE ALTERNATIVE SMALL SETTLEMENT LOCATIONS

- Over 50% of the potential location should be within 400m of the small settlement edge;
- Over 50% of the potential location should be within 800m of at least one of the following services: public transport access point, (train station or bus station), GP surgery, a primary school, a local shop and/or publicly accessible green space;
- Over 50% of each field/land parcel does not coincide with a constraint including Flood Zones 2 or 3, AONB, ALC Grade 1, Scheduled Monuments, SSSI, Registered Parks and Gardens and ancient woodland;
- Sports facilities and publicly accessible greenspaces are included in the potential location, although it assumed that these would be retained;
- Farms and private residential properties are excluded from the potential location where practical; and
- Only greenfield locations, such as agricultural fields, have been included. The identification of small settlement locations does not include Previously Developed Land.

The small settlement locations are designed to accommodate between 50 and 500 units at a dwelling per hectare scale of 35dph. Housing to green space for green infrastructure should operate on a ratio of 60:40 of the total area. In other words, at least 40% of the land area should be planned for green infrastructure.

Figure 3.4: Procedure for identifying reasonable alternative Small Settlement Locations

- 3.7.2 Reasonable alternative development locations have been identified around the following small settlements:

- | | |
|---|---|
| <ul style="list-style-type: none">• Barford• Bearley• Bidford• Bishop's Tachbrook• Claverdon• Cubbington• Earlswood• Hampton Magna• Hatton Park• Hatton Station• Henley | <ul style="list-style-type: none">• Kineton• Kingswood• Long Itchington• Radford Semele• Salford Priors• South Coventry• Studley• Wellesbourne• Wilmcote• Wood End• Wootton Wawen |
|---|---|

3.7.3 These are presented in **Figure 5.1**.

3.8 Methodology to identify New Settlement Locations

3.8.1 The 7 New Settlements Locations have been identified by the Councils. The SA Team has prepared a spatial expression of each New Settlement using a crude 250ha area of search in a circular search area around the approximate location provided by the Councils in the Issues and Options Consultation Report.

3.9 Methodology to identify Spatial Growth Options and Policy Options

3.9.1 The Councils have drawn on an earlier stage of consultation which was undertaken in 2021 to capture views from stakeholders and the public about the way the plan should begin to take shape. The 2021 consultation included seven growth options which have now been refined to produce five. These are:

- Rail Corridors
- Sustainable Travel
- Economy
- Sustainable Travel and Economy, and
- Dispersed.

3.10 Description and evaluation of effects

3.10.1 **Chapters 4 – 8** provides appraisal of the different types of reasonable alternative. The appendices provide more detail about how each reasonable alternative performs in terms of impact assessment score. Where possible, **Appendix B-D** also provides information about potential mitigation solutions that might be readily engaged to improve the sustainability performance.

4 Evaluation of the Broad Locations at the Main Settlements

4.1 The 32 Broad Locations

4.1.1 Reasonable alternative Broad Locations have been identified around various main settlements as follows:

- | | | |
|----------------------------------|----------------------------------|---------------------------------|
| • Alcester Northeast | • Royal Leamington Spa Northwest | • Southam Southeast |
| • Alcester South | • Royal Leamington Spa South | • Southam Southwest |
| • Alcester West | • Royal Leamington Spa Southeast | • Stratford-upon-Avon East |
| • Kenilworth North | • Royal Leamington Spa Southwest | • Stratford-upon-Avon Northeast |
| • Kenilworth Northeast | • Shipston East | • Stratford-upon-Avon Northwest |
| • Kenilworth Northwest | • Shipston North | • Stratford-upon-Avon South |
| • Kenilworth South | • Shipston Southwest | • Stratford-upon-Avon Southwest |
| • Kenilworth Southeast | • Shipston West | • Warwick Northeast |
| • Kenilworth West | • Southam Northeast | • Warwick Northwest |
| • Royal Leamington Spa East | • Southam Northwest | • Warwick West |
| • Royal Leamington Spa Northeast | | • Whitnash |

4.1.2 **Figure 4.1** illustrates the distribution of the Broad Locations.

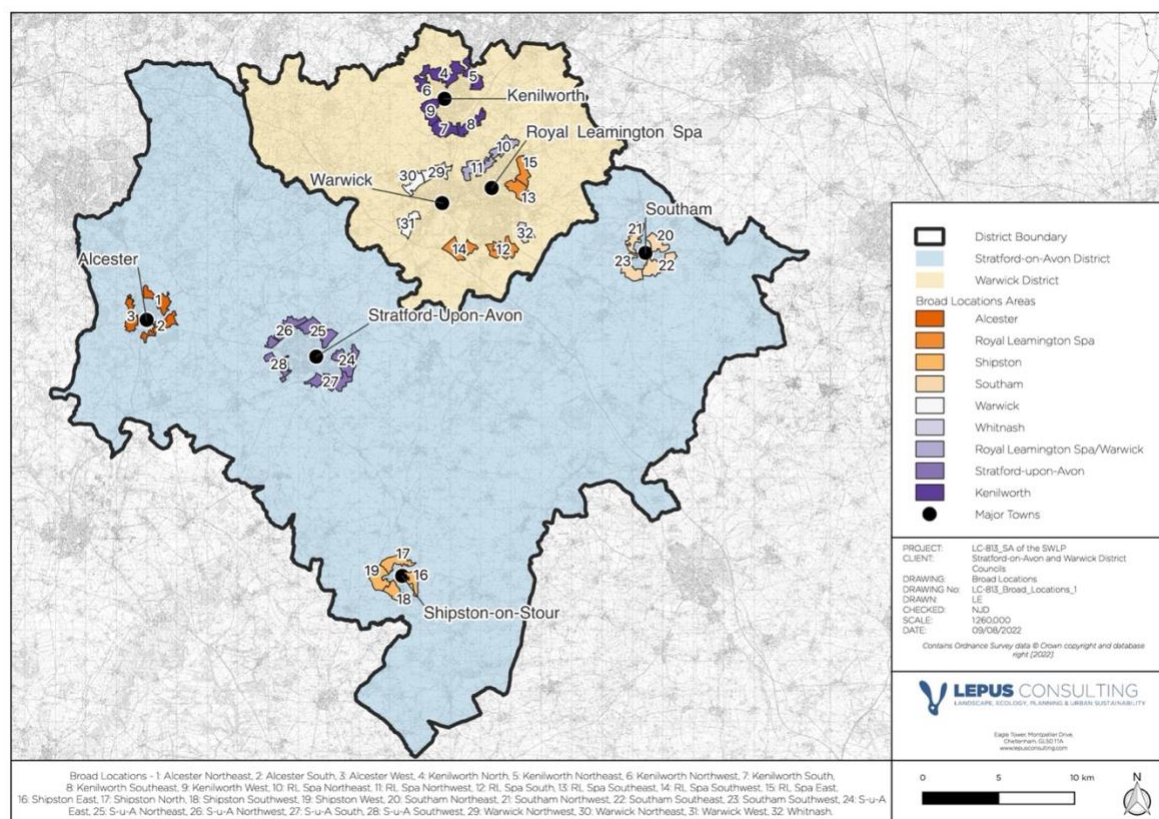
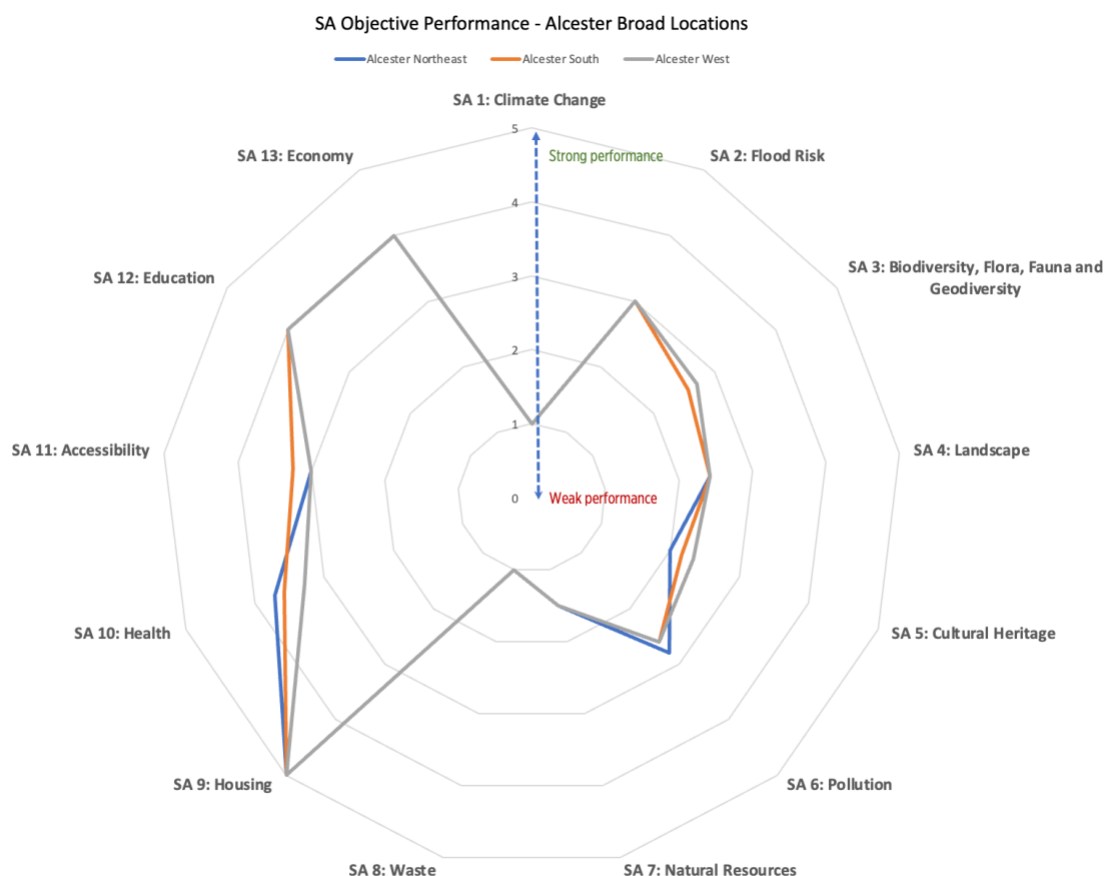


Figure 4.1: Reasonable alternative Broad Locations

4.2 Technical data

4.2.1 **Appendix B** provides an individual appraisal of each of the 32 Broad Locations. Each reasonable alternative has been assessed for likely impacts against the 13 SA Objectives, as outlined in the SA Framework (see **Appendix A**). Likely sustainability impacts have been set out in the tables within each SA Objective, in accordance with the methodology set out in **Chapter 2**.

4.3 Alcester



SA Objective 1: Climate Change

4.3.1 All BLs perform similarly against SA Objective 1. Large scale residential-led development is likely to result in an increase in GHG emissions. Development of up to 2,000 dwellings could increase carbon emissions in the local plan area by more than 1% of the existing Stratford on Avon CO₂ emission levels (currently 625 dwellings) and result in a major adverse impact.

4.3.2 This can be partially mitigated through principles associated with '20-minute neighbourhoods' which seek to reduce transport-related GHG emissions by neighbourhood design. The SWLP seeks to support the creation of 20-minute neighbourhoods where development is located close to local services to meet people's daily needs, reducing the need to travel by private car and encouraging the use of active and public transport. This would in turn lead to a reduction in transport related GHG emissions. In addition, the SWLP will seek to make further reductions in GHG emissions through the adoption of energy efficiency and high sustainability standards for buildings to minimise carbon emissions.

- 4.3.3 Mitigation may be achieved by future policies in the SWLP which will seek to reduce GHG emissions associated with the construction and operation of homes. Impacts can be reduced by implementing low carbon building processes and, materials and operational consideration e.g. Passivhaus; Renewable energy; Modular housing. Higher density developments can make destinations easily accessible by walking or cycling and can bring people together to support local public transport, facilities and local services. Integrated active travel which maximises people's travel choices for low-carbon modes of transport like rail, bus, other public transport, walking and cycling is essential.
- 4.3.4 Support for decentralised, low carbon and renewable energy generation whether on site or standalone renewable energy generation sites will help reduce GHG emissions in the medium and long term.
- 4.3.5 The SWLP climate change study is currently being undertaken and is likely to provide further evidence to assist with the sustainability appraisal process.

SA Objective 2: Flood Risk

- 4.3.6 All BLs in Alcester coincide with scattered areas of low, medium, and high SWFR. Without mitigation, development at this location could have a major adverse impact on flooding. Sustainable drainage schemes which seek to reduce surface water flood risk by maintaining surface water drainage to 'greenfield runoff' rates can be used to mitigate development proposals which coincide with areas of SWFR.
- 4.3.7 No significant amount of flood zone 2 or 3 is present in any BL. The worst performing site is Alcester West, which has a small area at the centre of the site which coincides with Flood Zone 3. Alcester South has very small areas of coincidence with Flood Zone 2, whilst Alcester Northeast has small areas of Flood Zone 2 and 3. In both cases, impacts on the Flood Zone which could be mitigated by avoiding the Flood Zones. **Best performing BLs: Alcester Northeast and Alcester South**

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.3.8 All BLs partially coincide with LWSs (such as 'Cold Comfort Lane Orchard', 'Oversley Mill Flood Meadows' and 'River Arrow') and Priority Habitats. Impacts can principally be mitigated by avoided by avoiding these areas in the development of the BLs. Design mitigation will be required if large scale development is located near an LWS. It is possible to mitigate effects with appropriate GI strategy and land management solutions.
- 4.3.9 Priority habitats not available for mapping include the network of hedgerows that cross all BLs. Biodiversity Net Gain strategies may be used to avoid no net loss. Veteran Tree data was not available and site visits would be helpful to collect further data.
- 4.3.10 Alcester South is in close proximity to ancient woodland; 'Oversley Wood' is located approximately 85m to the south of the location. A minor adverse impact on this ancient woodland could be expected. Impacts might include: increasing the amount of dust, light, water, air and soil pollution; increasing disturbance to wildlife, such as noise from additional people and traffic; increasing damage to habitat, for example trampling of plants and erosion of soil by people accessing the woodland or tree root protection areas; increasing damaging activities like fly-tipping and the impact of domestic pets. **Best performing BL: Alcester Northeast and Alcester West**

SA Objective 4: Landscape

- 4.3.11 Minor adverse effects are associated with the 'Arden' SLA and various character sub-areas such as the Arden River Valleys and Arden Estatelands as development could alter the setting and character of the landscape. Landscapes in the Northeast and South have been identified as suitable for enhancement which possibly provides an opportunity for development to contribute to this. Development could also exacerbate urban sprawl and impact views for users of the PRoW network which includes promoted routes such as the Monarch's Way in Alcester West BL and Arden Way in Alcester Northeast and South. To mitigate these issues development design should follow and retain the landscape characteristics. All BLs perform similarly in terms of landscape sensitivity. Alcester NE and Alcester South include areas of high sensitivity landscape whilst the West has none.
- Best performing BL: Alcester West**

SA Objective 5: Cultural Heritage

- 4.3.12 Alcester is rich in cultural heritage and there are a number of important constraints that need to be considered as part of any development proposals at this location.
- 4.3.13 Alcester NE has a Grade 1 listed building on the edge of the location. A likely major adverse impact on the setting of the 'Church of St Mary the Virgin Dovecote', which is located 20m from the Broad Location, is possible. The same applies to the Grade II* listed building, Church of St Mary the Virgin'. A potential major adverse impact on the setting of the 'Church of St Mary the Virgin', which is located 25m from the Broad Location, is expected.
- 4.3.14 In terms of mitigation, both features lie outside the Broad Location and it may be possible that impacts on the significance of these assets could be avoided through the layout and design of the proposals.
- 4.3.15 Alcester West is adjacent to the conservation area 'Alcester' and adjacent to the northern end of 'Ragley Hall'. Development could adversely affect the setting of both features. Alcester West is also in proximity to several Grade II listed buildings that lie to the south of the BL; a small cluster also lie to the west of the BL; the setting of these may be less affected, if at all.
- 4.3.16 Alcester South performs best in terms of Cultural Heritage due to presenting the smallest impact on the settings of areas of cultural heritage. The impact the BLs have on the heritage assets can be effectively mitigated by appropriate and effective layout and design of the proposed development. **No best performing BL; Alcester South is the most constrained.**
- 4.3.17 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

- 4.3.18 All BLs are likely to lead to increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.3.19 All BLs coincide or are adjacent to watercourses, such as 'River Alne' and 'River Arrow', which may lead to the development proposals impacting local watercourses. It may be possible to mitigate the potential impacts on watercourses through the implementation of SuDS and GI to reduce the impact during construction and operational stages.

- 4.3.20 Alcester Northeast performs best as it is the only BL which does not coincide with a main road, reducing the likelihood of exposing site end-users to higher levels of transport-associated air and noise pollution. Issues of transport-associated noise and air pollution can be mitigated effectively through development layout and implementation of green buffers, such as hedgerows and vegetation to improve air quality. **Best performing BL: Alcester Northeast**

SA Objective 7: Natural Resources

- 4.3.21 All BLs are situated on previously undeveloped land and thus adversely impact land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.3.22 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.3.23 Alcester Northeast performs best as it is only partially coincident with an MSA; the other BLs coincide wholly with the MSA. Mitigation would only be partially possible by seeking to retain areas of land for greenspace use. **Best performing BL: Alcester Northeast**

SA Objective 8: Waste

- 4.3.24 Any of the BLs could deliver up to 2,000 dwellings and could increase waste in the Plan area by more than 1%. The 1% principle is limited and only a coarse precautionary indicator. It applies to all BLs and is only a guideline. All sites perform in the same way and will lead to significant increases in waste.
- 4.3.25 In terms of mitigation potential, the Broad Locations have been identified with the intention of supporting 20-minute neighbourhoods with the aim of reducing the need to travel to meet daily needs, seeking to reduce transport-related GHG emissions.

SA Objective 9: Housing

- 4.3.26 All BLs perform very well against SA Objective 9, due to all the BLs consisting of residential-led developments. All BL developments will result in a net gain of housing, with the provision of up to 2,000 houses to be expected. This would contribute significantly to local housing needs and would be a major positive impact on housing provision.

SA Objective 10: Health

- 4.3.27 All BLs situated within target distances of leisure facilities, greenspace and PRow/cycle paths which positively impacts human wellbeing.
- 4.3.28 All BLs are located outside the sustainable distance from a hospital with an A&E department, which would have a minor impact on health. Minor impacts could possibly be mitigated by the implementation of new/improved public transport for patients.
- 4.3.29 Alcester Northeast performs best, being the only BL which does not coincide with a main road, with air quality and noise pollution levels expected to be lower at this BL. Also, Alcester West is further than the sustainable distance from a GP surgery, which would adversely impact the SA Objective for health. **Best performing BL: Alcester Northeast**

SA Objective 11: Accessibility

- 4.3.30 All BLs are within a sustainable distance from a local food shop, 'Tesco Express' and 'Waitrose & Partners Alcester'. This is a minor positive effect.
- 4.3.31 None of the BLs are within the sustainable target distance of a railway station, leading to a minor adverse impact on transport. Poor access to transport and local services could be mitigated by expanding and improving local public transport networks. Alcester NE falls outside of the target distance for a bus stop.
- 4.3.32 Alcester South is the best performing BL with moderate connectivity to the area around it compared to the poor connectivity attributed to other BLs. Poor connectivity of the other BLs can be effectively mitigated with implementation of transport schemes and improvements to active travel measures such as supporting cycle and pedestrian networks; some measures will require considerably more intervention than others to deliver a successful mitigation solution. **Best performing BL: Alcester South**

SA Objective 12: Education

- 4.3.33 Each BL is within the sustainable target distance to allow for access to Primary, Secondary School and to Tertiary Education. Alcester Northeast is the best performing BL, being closer to primary and non-selective secondary education than Alcester West, resulting in Alcester Northeast having a positive impact on education. **Best performing BL: Alcester Northeast**

SA Objective 13: Economy

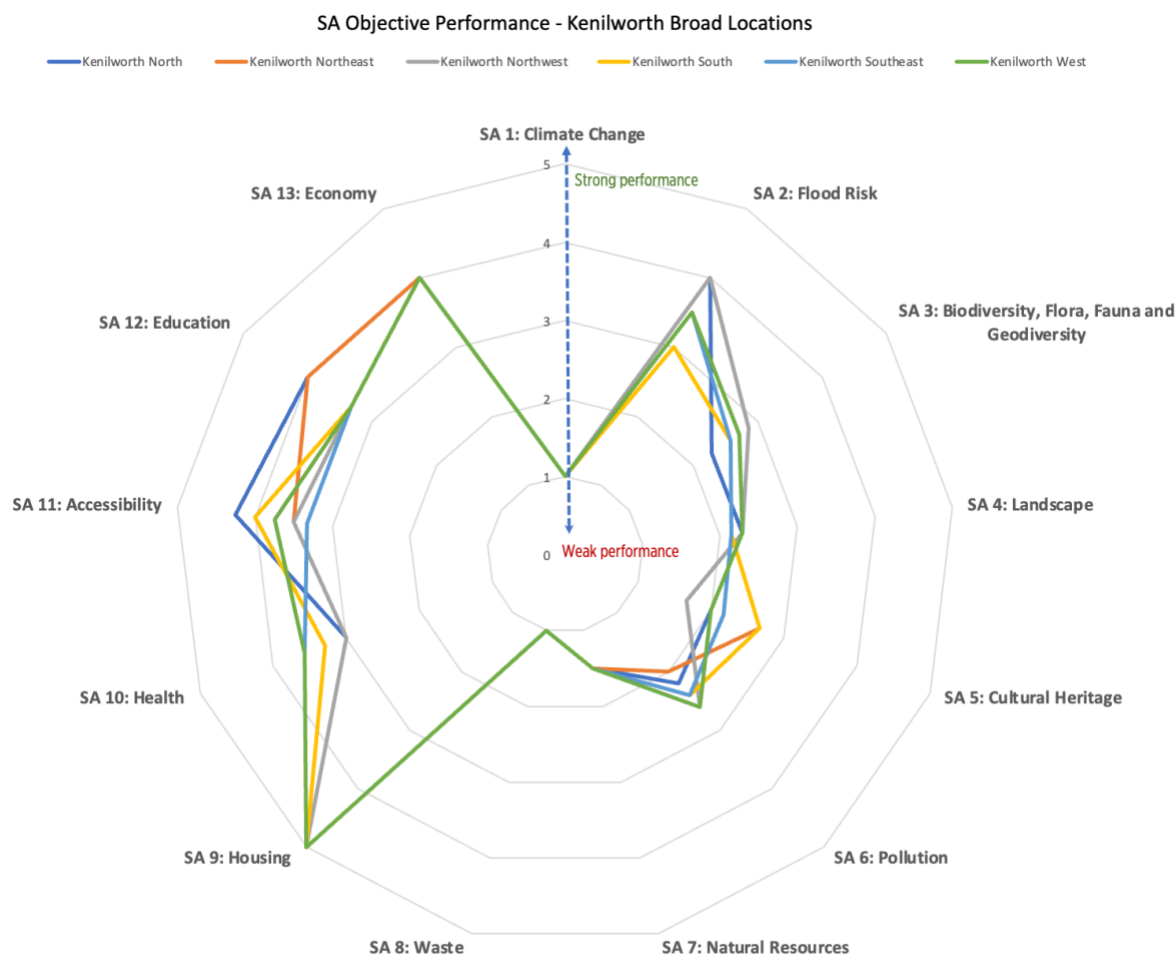
- 4.3.34 All BLs have good access to employment opportunities, meaning Alcester as a settlement performs well against SA Objective 13. Minor positive impacts on the local economy would be expected due to sustainable target distances to various business opportunities, including an industrial area in North Alcester.
- 4.3.35 Alcester Northeast performs best in terms of an 800m zone being closest to the large cluster of employment opportunities in Alcester, with the most potential to positively impact the local economy. **Best performing BL: Alcester Northeast**

4.4 Conclusion – Overall Rank

4.4.1 Alcester Northeast is the best performing Broad Location.

ALCESTER	Alcester Northeast	Alcester South	Alcester West
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.			
Flood risk Plan for anticipated levels of climate change.	=Best	=Best	
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.	= Best		= Best
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.			Best
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	Best		Best
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.	Best		
Natural resources Protect and conserve natural resources including soil, water and minerals.	Best		
Waste Reduce waste generation and disposal and support sustainable management of waste.			
Housing Provide affordable, high quality and environmentally sound housing for all.			
Human Health Safeguard and improve community health, safety and wellbeing.	Best		
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.		Best	
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.	Best		
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.	Best		

4.5 Kenilworth



SA Objective 1: Climate Change

- 4.5.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective

SA Objective 2: Flood Risk

- 4.5.2 Small proportions of Kenilworth Northeast, Kenilworth South and Kenilworth Southeast, coincide with Flood Zone 3 which presents a major adverse in terms of flood risk. Due to the low levels of coincidence at these BLs, the Flood Zone presence could be mitigated through avoidance. The same is true of sites which contain Flood Zone 2.
- 4.5.3 The worst performing site in terms of flood risk would be Kenilworth Northeast, due to a larger proportion at the centre of the site coinciding with Flood Zone 3. Flood zones in the other BLs can be mitigated by avoiding the flood zones more easily than Kenilworth Northeast. Kenilworth West would perform best in terms of flood risk due to the BL being wholly located within Flood Zone 1. It should be noted that all BLs coincide with areas of high Surface Water Flood Risk (which can be mitigated with the use of SuDS). **Best performing BL: Kenilworth North and Northwest**

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.5.4 All BLs partially coincide with LWSs and Priority Habitats. Impacts can principally be mitigated by avoided by avoiding these areas in the development of the BLs. Design mitigation will be required if large scale development is located near an LWS. It is possible to mitigate effects with appropriate GI strategy and land management solutions.
- 4.5.5 Priority habitats not available for mapping include the network of hedgerows that cross all BLs. Biodiversity Net Gain strategies may be used to avoid no net loss. Veteran Tree data was not available and site visits would be helpful to collect further data.
- 4.5.6 Kenilworth North and Kenilworth Southeast are located adjacent to ancient woodland, which could lead to adverse impacts on these woodlands. Impacts might include: increasing the amount of dust, light, water, air and soil pollution; increasing disturbance to wildlife, such as noise from additional people and traffic; increasing damage to habitat, for example trampling of plants and erosion of soil by people accessing the woodland or tree root protection areas; increasing damaging activities like fly-tipping and the impact of domestic pets.
- 4.5.7 Adverse impacts on the setting and biodiversity of the ancient woodland can be mitigated through the location and layout of developments, with the inclusion of suitable buffer zones on the edges of the development which are nearest to the ancient woodland. Kenilworth North and Kenilworth Northeast are located in close proximity to LNRs, which could lead to adverse impacts such as visitor pressure. It might be possible to mitigate potential adverse effects through suitable layout and location of this development, with the inclusion of suitable buffer zones.
- 4.5.8 The best performing BL in the settlement is Kenilworth Northwest, as it coincides with fewer LWSs and performs well against biodiversity receptors in the area. Kenilworth Northwest is likely to require less mitigation to reduce the likelihood of impacts to local designated sites and LWSs. **Best performing BL: Kenilworth Northwest**

SA Objective 4: Landscape

- 4.5.9 Kenilworth North, Northwest and Northeast each have similar performance levels in terms of impacts on their character areas. Each BL is located in the Arden Parklands character area, which includes opportunities for enhancement which implies that perhaps parts of the character area are better than others for development.
- 4.5.10 Development of up to 2,000 homes at any location in Kenilworth may lead to urban sprawl and is likely to affect views from PRoW.
- 4.5.11 Kenilworth South, Southeast and Northeast include a risk of coalescence with nearby settlements which is expected to increase with the development of Kenilworth Northeast (with Gibbet Hill), Kenilworth South (Ashow) and Kenilworth Southeast (Leek Wootton).
- 4.5.12 These adverse impacts will be difficult to avoid. Partial mitigation may be achieved using greenspace and sensitive design in the developments.
- 4.5.13 There is no landscape sensitivity data available. Additional surveys are required to understand latest sensitivity qualities at each BL (see **Chapter 12**). Desktop analysis of OS mapping and other sources suggests that Kenilworth Northwest and West have strong integrated landscapes with few infrastructure components or built forms that might detract from landscape quality. **Best performing BL: Kenilworth North**

SA Objective 5: Cultural Heritage

- 4.5.14 Kenilworth is rich in cultural heritage and there are a number of important constraints that need to be considered as part of any development proposals at this location.
- 4.5.15 Kenilworth West and Northwest are both in proximity to Grade 1 listed building, Kenilworth Castle. A likely major adverse impact on the setting is possible making mitigation more challenging.
- 4.5.16 All locations affect Grade II buildings to differing extents. In terms of mitigation, it may be possible that impacts on the significance of these assets could be avoided through the layout and design of the proposals. Locations associated with predicted major impacts may be more challenging to mitigate, if at all.
- 4.5.17 Kenilworth North, Kenilworth Southeast and Kenilworth West are located in close proximity to SMs and RPGs, causing a minor adverse impact.
- 4.5.18 Kenilworth North and Kenilworth Northwest are located in close proximity to CAs, adversely impact the setting of those areas. Potential impacts can be mitigated through location and layout plans of the developments.
- 4.5.19 **Best performing BL is Kenilworth Northeast.**
- 4.5.20 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

- 4.5.21 Development at any of the six BLs are likely to increase air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.5.22 All BLs are located within 200m of a watercourse, with four BLs (Kenilworth Northwest, Kenilworth North, Kenilworth Northeast and Kenilworth West) coinciding with Groundwater SPZs. Minor adverse impacts could occur in relation to water quality. Impacts could be mitigated effectively through the use of GI and SuDS to reduce impacts associated with the operation of the development.
- 4.5.23 Kenilworth North and Kenilworth Northeast are located within close proximity to an AQMA. Close proximity to AQMAs could expose site end users to higher levels of air and noise pollution.
- 4.5.24 Kenilworth North, Kenilworth Northeast, Kenilworth South and Kenilworth Southeast are located within 200m of either a railway line or main road which could create a minor adverse impact due to exposure to air/noise pollution. Mitigation can be achieved through the implementation of green buffers and location and layout plans of future development.
- 4.5.25 Kenilworth West performs best with the lowest impact SA Objective 6 indicators, being furthest from watercourses, roads and groundwater SPZs than Kenilworth Northwest, the other BL which has the smallest impact on SA Objective 6. Kenilworth West would be expected to require the least mitigation to be suitable for development. **Best performing BL: Kenilworth West**

SA Objective 7: Natural Resources

- 4.5.26 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.5.27 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.5.28 Kenilworth Northeast performs best as it is only partially coincident (66%) with an MSA; the other BLs coincide wholly (or almost wholly) with the MSA. Mitigation would only be partially possible by seeking to retain areas of land for greenspace use. **Best performing BL: Kenilworth Northeast**

SA Objective 8: Waste

- 4.5.29 See **Section 4.8**.

SA Objective 9: Housing

- 4.5.30 See **Section 4.9**.

SA Objective 10: Health

- 4.5.31 With the exception of Kenilworth West, all BLs are located outside of the sustainable target distance of GP surgeries and Leisure facilities, meaning human wellbeing would be adversely impacted. These impacts can be mitigated through the increased provision of healthcare services in the BLs.
- 4.5.32 All BLs are within the sustainable distance for PRowS/Cycle Path Networks.
- 4.5.33 Only Kenilworth South and Kenilworth Southeast are within the sustainable target distance to a hospital with an A&E department, which would have a minor positive impact on health of site end users at these locations.
- 4.5.34 Only Kenilworth Northwest and West are not in proximity to a main road or AQMA. Adverse impacts on air and noise pollution are likely at the other BLS. Effects can possibly be mitigated by the location and layout plans of future proposals and the implementation of green buffers. **Best performing BL: Kenilworth South**

SA Objective 11: Accessibility

- 4.5.35 All BLs are within the sustainable target distance of a railway station and food stores. Three BLs are within the sustainable target distance of bus stops with regular services. These all represent positive effects.
- 4.5.36 Kenilworth Northwest, South and West are all outside the bus stop distance leading to a minor adverse impact at these locations since more people may be inclined to travel by car. This adverse impact can potentially be mitigated by the expansion and improvement to public transport, such as buses. Connectivity is generally poor throughout the settlement, with four BLs ranking at Grade D/E and consequently incurring a minor adverse impact on transport. Mitigation can be achieved through improvements to public transport provision, roads, pedestrian networks and active travel infrastructure.

- 4.5.37 Kenilworth North performs best as it incurs a minor adverse impact on access to food stores but is situated in an area with good connectivity (Grade B) to the wider SWLP area. **Best performing BL: Kenilworth North**

SA Objective 12: Education

- 4.5.38 Each BL is within the sustainable target distance to allow for access to Tertiary Education.
- 4.5.39 All except Kenilworth Southeast are inside the target distance for Primary Schools.
- 4.5.40 Kenilworth Northwest, Kenilworth South and Kenilworth West are located outside the sustainable target distance from a secondary school, which could effectively be mitigated through potential secondary education provisions within the BL layout plan.
- 4.5.41 Kenilworth North is the best performing BL with good access to primary and tertiary education and partial proportions of the site with access to secondary education. Therefore, less mitigation will be required at Kenilworth North than at other BLs to ensure good provisions for education. **Best performing BL: Kenilworth North**

SA Objective 13: Economy

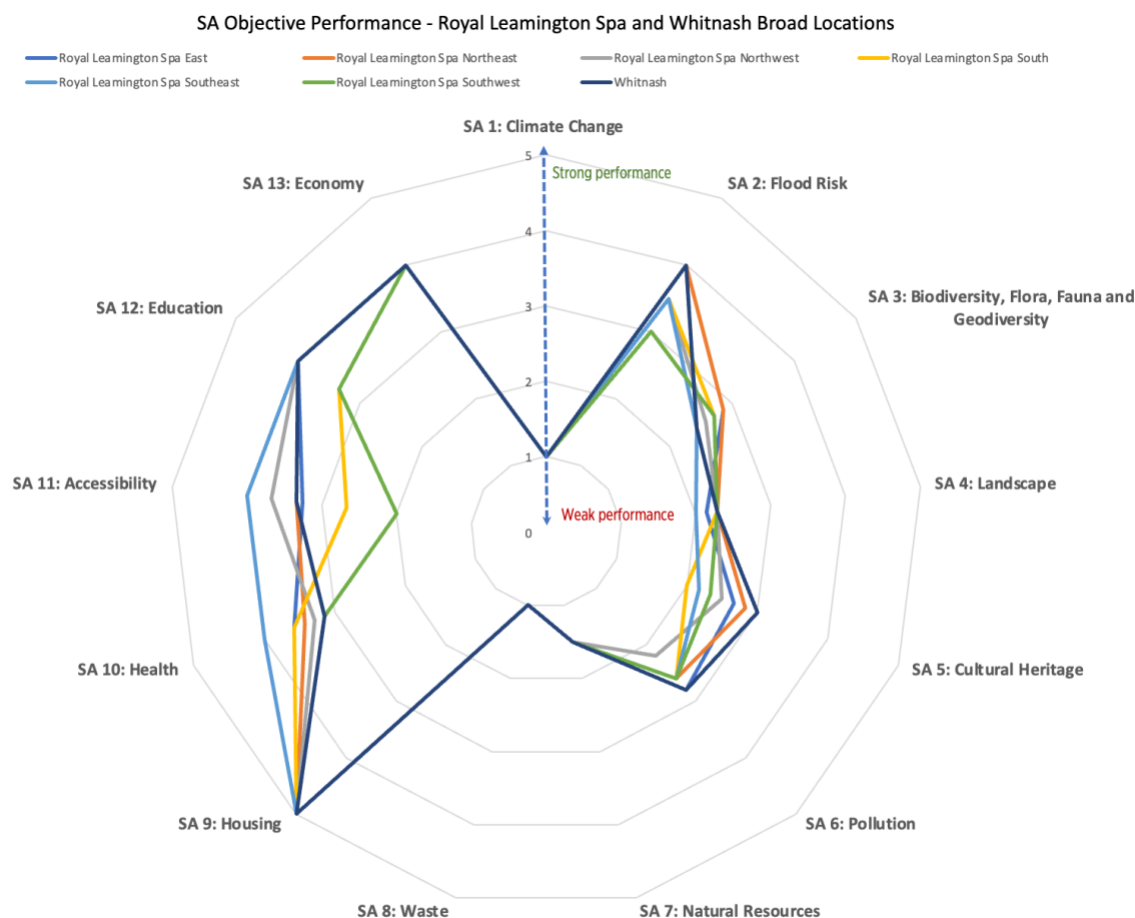
- 4.5.42 Kenilworth performs well against SA Objective 13, with all BLs having good access to employment opportunities. A minor positive impact on the local economy would be expected as locations are within the sustainable target distance to various business opportunities. T
- 4.5.43 The impact of the BLs on employment floorspace provision is uncertain as they are proposed to be situated on previously undeveloped land, with no loss of current employment space. There is potential to improve local economic centres, which may provide employment opportunities for current and future residents.
- 4.5.44 Kenilworth Northeast is the best performing BL, being closest to a number of employment opportunities in Kenilworth, which would consequently positively impact the local economy. **Best performing BL: Kenilworth Northeast**

4.6 Conclusion – Overall Rank

4.6.1 Broad Locations in the north perform better overall.

KENILWORTH	North	North east	North west	South	South east	West
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.						
Flood risk Plan for anticipated levels of climate change.	=Best	=Best				
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.			Best			
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.	Best					
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.		Best				
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.						Best
Natural resources Protect and conserve natural resources including soil, water and minerals.		Best				
Waste Reduce waste generation and disposal and support sustainable management of waste.						
Housing Provide affordable, high quality and environmentally sound housing for all.						
Human Health Safeguard and improve community health, safety and wellbeing.				=Best		=Best
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.	Best					
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.	Best					
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.		Best				

4.7 Royal Leamington Spa (RLS) & Whitnash



SA Objective 1: Climate Change

- 4.7.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective

SA Objective 2: Flood Risk

- 4.7.2 All six BLs coincide with areas of high surface water flood risk. Small proportions of three of the BLs partially coincide with Flood Zone 3. Small proportions of two BLs partially coinciding with Flood Zone 2, presenting a negligible adverse impact. Due to the low levels of coincidence within the locations, mitigation can be achieved effectively with the use of SuDS.
- 4.7.3 RLS Northeast would perform best against flood risk as this BL is wholly located within Flood Zone 1 and is 300m from Flood Zone 3. RLS East, which is also located wholly in Flood Zone 1, is adjacent to Flood Zone 3. **Best performing BL: Royal Leamington Spa Northeast and RLS East**

SA Objective 3: Biodiversity, Flora, Fauna, and Geodiversity

- 4.7.4 All BLs coincide with LWSs. Impacts can principally be mitigated by avoided by avoiding these areas in the development of the BLs. Design mitigation will be required if large scale development is located near an LWS. It is possible to mitigate effects with appropriate GI strategy and land management solutions.
- 4.7.5 Six out of seven BLs coincide with Priority Habitats recorded on Natural England's national inventory. Priority habitats not available for mapping include the network of hedgerows that cross all BLs. Biodiversity Net Gain strategies may be used to avoid no net loss. Veteran Tree data was not available and site visits would be helpful to collect further data.
- 4.7.6 RLS Northeast is located adjacent to ancient woodland, which could result in adverse effect on the habitats and species associated with this designation. Adverse impacts can be mitigated through layout of developments to avoid these woodlands, as well as implementation of suitable buffers in areas of locations nearest to ancient woodlands.
- 4.7.7 RLS South East coincides with large parts of Leam Valley LNR. This would lead to direct adverse impacts through inter alia loss of habitat. Avoidance, buffer zones and a suitable development layout would help mitigate potential adverse effects. If this is not possible, complex mitigation solutions are possible through compensation. RLS East is open countryside adjacent to a Country Park which links with Leam Valley LNR. However, this is likely to be less impactful than allocating BL Southeast.

4.7.8 **Best performing BL: Royal Leamington Spa Northwest**

SA Objective 4: Landscape

- 4.7.9 All BLs are likely to contribute to urban sprawl and impacts are likely to affect views from the existing PRow network.
- 4.7.10 All BLs are coincident with landscape character areas that could be enhanced according to the 1993 Landscape Guidelines. This implies that there is potentially some sort of capacity for change in these areas albeit that the emphasis should be on enhancement.
- 4.7.11 Two BLs are associated with impacts on Country Parks. RLS East is located approximately 150m from 'Newbold Comyn' Country Park. A minor negative impact on the setting of this CP could be expected. RLS South East coincides with 'Newbold Comyn' Country Park. A major negative impact on this CP could be expected upon development at this Broad Location. These major adverse impacts will be difficult to avoid. The minor adverse impact may be mitigated through the location and layout of the future development, with the incorporation of suitable buffers if necessary. Mitigation may also be achieved using greenspace and sensitive design in the developments.
- 4.7.12 There is no landscape sensitivity data available. Additional surveys are required to understand latest sensitivity qualities at each BL (see **Chapter 12**). Desktop analysis of OS mapping and other sources suggests that RLS East and Southeast have strong integrated landscapes with few infrastructure components or built forms that might detract from the landscape. **Best performing BL: Royal Leamington Spa Northwest** probably because it shares the longest boundary with existing built form.

SA Objective 5: Cultural Heritage

- 4.7.13 Royal Leamington Spa is rich in cultural heritage and there are a number of important constraints that need to be considered as part of any development proposals at this location.

- 4.7.14 RLS South is located in proximity to the Church of St Chad a Grade I Listed Building. A minor adverse impact on the setting is possible and could be mitigated subject to field work establishing the precise nature of the impact on setting.
- 4.7.15 With the exception of RLS Northeast, all locations affect Grade II Listed Buildings to some extent. In terms of mitigation, it may be possible that impacts on the significance of these assets could be avoided through the layout and design of the proposals. Locations associated with predicted major impacts may be more challenging to mitigate, if at all.
- 4.7.16 There are no known constraints at Whitnash. **Best performing BL is Whitnash.**
- 4.7.17 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

- 4.7.18 All BLs are likely to result in increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.7.19 Except, RLS Northeast, all BLs are located within 200m of a watercourse. This could lead to minor adverse impacts from construction and operational phases of development.
- 4.7.20 RLS Northeast and RLS North West coincide with groundwater SPZs, potentially leading to minor adverse impact on water quality. This can be mitigated to some extent through the use of SuDS and GI to reduce the impact during the operation of the development.
- 4.7.21 Only RLS East and Whitnash are not located within 200m of either a railway line or main road. BLs next to a main road or rail route could potentially increase existing levels of air and noise pollution from vehicular traffic or noise from trains; minor adverse impacts in terms of increased pollution could be expected. Effective mitigation can be achieved through the implementation of green buffers and appropriate layout of future development.
Best performing BL: Royal Leamington Spa East

SA Objective 7: Natural Resources

- 4.7.22 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.7.23 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.7.24 Whitnash performs best as it is only partially coincident with an MSA; the other BLs coincide wholly with the MSA. Mitigation would only be partially possible by seeking to retain areas of land for greenspace use. **Best performing BL: Whitnash**

SA Objective 8: Waste

- 4.7.25 See **Section 4.8.**

SA Objective 9: Housing

- 4.7.26 See **Section 4.9.**

SA Objective 10: Health

- 4.7.27 All BLs situated within target distances for PRow/cycle paths which positively impacts human wellbeing. Most are within the target distance for greenspace.
- 4.7.28 RLS East is the only BL which lies outside of the sustainable distance from a hospital with an A&E department, which would have a minor impact on health. Minor impacts could possibly be mitigated by the implementation of new/improved public transport for patient or the introduction of new facilities nearby. This could be challenging to deliver.
- 4.7.29 Five BLs are located, to some extent, within the sustainable target distance from GP Surgeries; Whitnash only approximately 50m within the sustainable target distance, BL RLS Northwest and Southwest do not.
- 4.7.30 Six BLs located outside the sustainable target distance from leisure facilities, which would present minor adverse impacts at these locations. **Best performing BL: Royal Leamington Spa Southeast**

SA Objective 11: Accessibility

- 4.7.31 Only RLS Southwest lies outside of the sustainable distance to a bus stop. Yet, only two locations, Northwest and Southeast are within the sustainable distance to a railway station, making these locations both strong performers in terms of public access.
- 4.7.32 Access to food stores varies: only half of the BLs have good access to a foodstore within the sustainable walking and cycling zone. This would lead to minor adverse impacts on the transport in and around the BLs, affecting connectivity to the surrounding areas. This can be mitigated through the increased provision of public transport and services.
- 4.7.33 Connectivity data was not available for the majority of the BLs in RLS so more information is needed in this respect. RLS East has poor connectivity to the wider plan area which would lead to a minor adverse impact on connectivity. This can be mitigated through improvements to road and pedestrian networks, transport improvement schemes and the implementation of active travel measures. **Best performing BL is RLS Southeast.**

SA Objective 12: Education

- 4.7.34 All BLs are situated within the target distance to primary education, leading to a minor positive impact for young children and families who wish to walk or cycle to school. The same applies to tertiary education access.
- 4.7.35 Five BLs are within the sustainable target distance of Secondary Schools, with South and Southwest being outside it. Minor adverse impacts associated with distance to secondary educational facilities can be mitigated through increased provision in the BLs. RLS Northwest is the best performing BL as it is wholly located within 1.5km of a secondary school, with a proportion of other BLs not being within the sustainable target distance. **Best performing BL: Royal Leamington Spa Northwest**

SA Objective 13: Economy

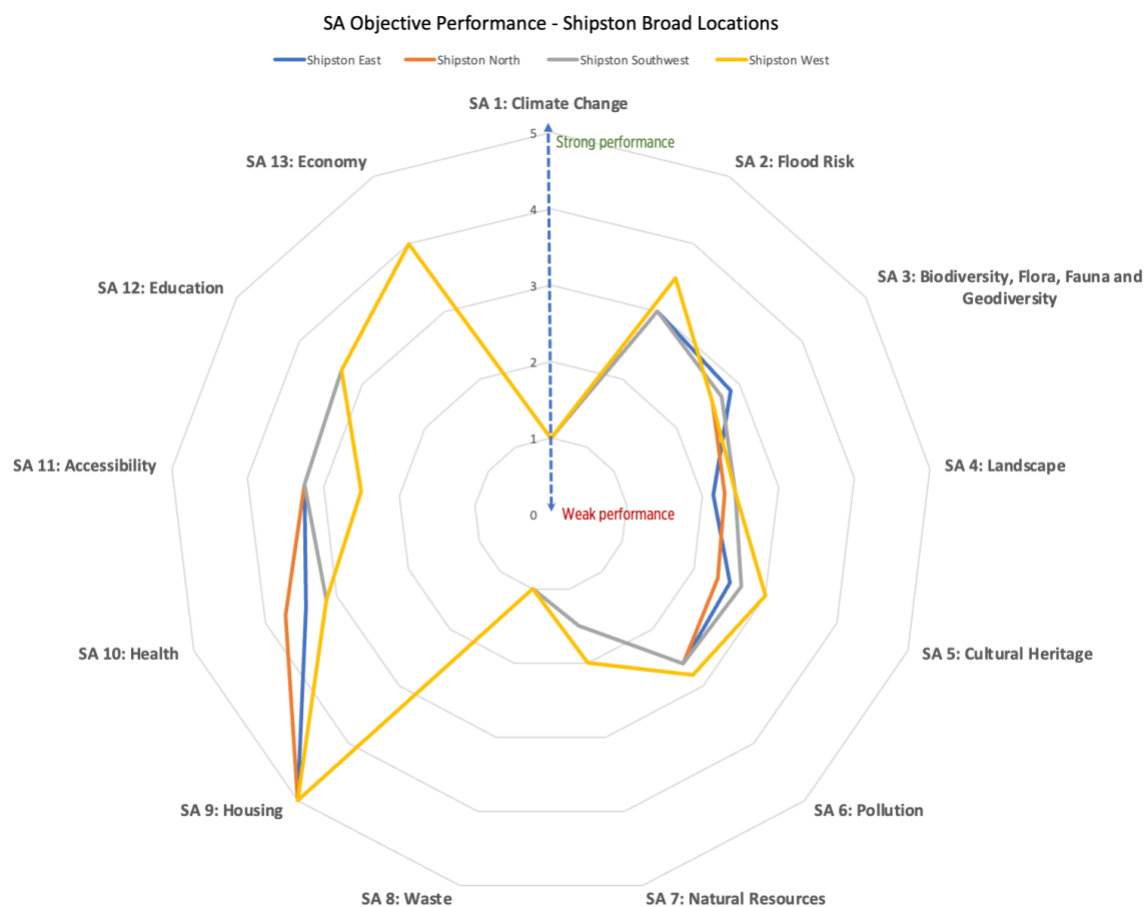
- 4.7.36 RLS performs well against SA Objective 13, due to all BLs having good access to employment opportunities. This would be expected to have a minor positive impact on the local economy as BLs are within the sustainable target distance to various businesses and employment opportunities. The impact of the BLs on employment floorspace provision is uncertain as they are planned on undeveloped land, which will result in no loss of current employment space. There is also potential to boost local economic centres, providing employment opportunities for current and future residents. RLS Southwest is the best performing BL, being closest to a number of employment opportunities in RLS. **Best performing BL: Royal Leamington Spa Southwest**

4.8 Conclusion – Overall Rank

4.8.1 No clear best performing Broad Location.

ROYAL LEAMINGTON SPA	East	North east	North west	South	South east	South west	Whitnash
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.							
Flood risk Plan for anticipated levels of climate change.	=Best	=Best					
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.			Best				
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.			Best				
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.							Best
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.	Best						
Natural resources Protect and conserve natural resources including soil, water and minerals.							Best
Waste Reduce waste generation and disposal and support sustainable management of waste.							
Housing Provide affordable, high quality and environmentally sound housing for all.							
Human Health Safeguard and improve community health, safety and wellbeing.					Best		
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.					Best		
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.			Best				
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.						Best	

4.9 Shipston-on-Stour



SA Objective 1: Climate Change

- 4.9.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective

SA Objective 2: Flood Risk

- 4.9.2 All four BLs coinciding with areas of high surface water flood risk. Also, small proportions of Shipston East, Shipston North and Shipston Southwest partially coincide with Flood Zone 3 and as such, present a negligible impact. Due to the low proportion of the sites coinciding with the flood zone, mitigation can be achieved through avoidance of the Zones.
- 4.9.3 Shipston West would perform the best in terms of flood risk due to this BL being wholly located within Flood Zone 1. Therefore, none of Shipston West would be require mitigation when avoiding other Flood Zones, which will occur in the other BLs. Surface Water Flood Risk can be mitigated with the appropriate use of SuDS. **Best performing BL: Shipston West**

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.9.4 The settlement as a whole performs reasonably well against SA Objective 3, with the BLs located far enough from any SACs, NNRs, Ancient Woodlands, LNRs or LGSs as to not impact upon the biodiversity, flora, fauna, or geodiversity in these areas of interest. Shipston North and Shipston West coincide with SSSI IRZs, meaning that adverse impacts are possible as consultation is required for residential developments of 100 units or more. Mitigation may or may not be required, dependant on the outcome of consultation with Natural England. However, all BLs coincide with LWSs, with Shipston North, Shipston Southwest and Shipston West all coinciding with Priority Habitats on the Natural England Inventory. Priority habitats not available for mapping include the network of hedgerows that cross all BLs. Biodiversity Net Gain strategies may be used to avoid no net loss. Veteran Tree data was not available and site visits would be helpful to collect further data.

Best performing BL: Shipston East

SA Objective 4: Landscape

- 4.9.5 All BLs are within the visual envelope of the AONB and minor adverse effects might be expected in terms of introducing up to 2,000 new dwellings on any side of Shipston-on-Stour. Field work evaluation is necessary to better understand the full impacts.
- 4.9.6 All BLs are likely to contribute to urban sprawl and impacts are likely to affect views from the existing PRow network.
- 4.9.7 Shipston East could potentially lead to coalescence with Willington. Design and layout could help mitigate and ultimately avoid this impact.
- 4.9.8 All BLs are coincident with landscape character areas that could be enhanced according to the 1993 Landscape Guidelines. This implies that there is potentially some sort of capacity for change in these areas albeit that the emphasis should be on enhancement.
- 4.9.9 Landscape sensitivity data shows that Shipston Southwest and West are in areas of medium sensitivity. Minor adverse effects are expected which can be mitigated through appropriate design of the development. Shipston East and North both contain substantial quantities of high/medium and high sensitivity land parcels. This will be more challenging to mitigate and major adverse effects are anticipated. Shipston East is also located on the eastern banks of the River Stour and would change the setting of the river. **Best performing BL: Shipston Southwest or West**

SA Objective 5: Cultural Heritage

- 4.9.10 Shipston North is in close proximity to two Grade I Listed Buildings, with Shipston East located within close proximity to a Grade II* Listed Building. Also, Shipston East, Shipston North and Shipston Southwest have a minor adverse impact on the setting attributed to these Grade II Listed Buildings. These minor adverse impacts can most likely be mitigated effectively by avoiding heritage assets with appropriate layout design of future developments.
- 4.9.11 Shipston North is located within close proximity to a RPG, presenting a minor adverse impact. Shipston East and Shipston North are located in close proximity to CAs, adversely impacting the setting of those areas. Again, these impacts can be mitigated through appropriate layout design of the developments.
- 4.9.12 There are no known constraints at Shipston West. **Best performing BL is Shipston West.**

- 4.9.13 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Environmental Pollution

- 4.9.14 Development at any of the six BLs are likely to result increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.9.15 All BLs are located in close proximity to a main road, which will lead to a minor adverse impact in terms of increased air, noise and light pollution. Mitigation can be achieved through the implementation of green buffers to improve air quality, as well as avoiding the impacts through appropriate layout design of the development.
- 4.9.16 Shipston West is the best performing BL, as it is the only BL that does not coincide or is located adjacent to a watercourse, meaning development would not lead to direct pollution of the watercourse. **Best performing BL: Shipston West**

SA Objective 7: Natural Resources

- 4.9.17 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.9.18 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.9.19 BL Shipston West performs best due to not coinciding with an MSA in comparison to other BLs which wholly or partially coincide with MSAs. **Best performing BL: Shipston West**

SA Objective 8: Waste

- 4.9.20 See **Section 4.8**.

SA Objective 9: Housing

- 4.9.21 See **Section 4.9**.

SA Objective 10: Health

- 4.9.22 All BLs are within the target distance to PRow/cycle networks, positively impacting human wellbeing. However, all BLs are outside the sustainable distance from a hospital with an A&E department leading to adverse sustainability performance in this respect.
- 4.9.23 Shipston East and Southwest are partially within the sustainable target distance to a leisure facility. This would be expected to have a minor positive impact on health. Shipston North and West have a majority of the BL area within the sustainable target distance to a leisure facility. This would be expected to have a major positive impact on health.
- 4.9.24 Shipston North and East are both partially within the target distance for GP surgery.

- 4.9.25 All BLs coincide with or are located in close proximity to a main road which presents a minor adverse impact on air quality and noise pollution in BLs of Shipston. Shipston West is located outside of the sustainable target distance from a greenspace. Minor adverse impacts associated with air quality and noise pollution can be mitigated through the implementation of green buffers to enhance air quality and human wellbeing. Adverse impacts associated with access to greenspace can be mitigated through appropriate planning and layout design of settlements. **Best performing BL: Shipston North**

SA Objective 11: Accessibility

- 4.9.26 Shipston West is the poorest location: it has minor negative effects associated with all of the sustainable distances. Southwest also falls outside of the sustainable target distance from bus stops. Excepting Shipston West, all locations are within the sustainable target distance of a food store.
- 4.9.27 Shipston East, Shipston North and Shipston Southwest have moderate connectivity to the wider plan area (Grade C connectivity) and Shipston West has poor connectivity which could see increased travel by car. This can be mitigated through road and pedestrian network improvements, also public transport improvement schemes and active travel measures.
- 4.9.28 Shipston West is the best performing BL in the settlement as it is the only one within the sustainable target distance of a food store. **Best performing BL: Shipston East and Shipston North**

SA Objective 12: Education

- 4.9.29 No BLs are located inside of the sustainable target distance of any tertiary education centres which would be expected to lead to a minor adverse impact on access to education. Adverse impacts could be mitigated through primary and tertiary education provisions within the BL plan layout although this could be a complex level of mitigation.
- 4.9.30 All BLs are within the target distance for primary and secondary education.
- 4.9.31 Shipston North is the best performing BL, with largest proportion of the location within the 800m sustainable target distance of educational facilities. **Best performing BL: Shipston North**

SA Objective 13: Economy

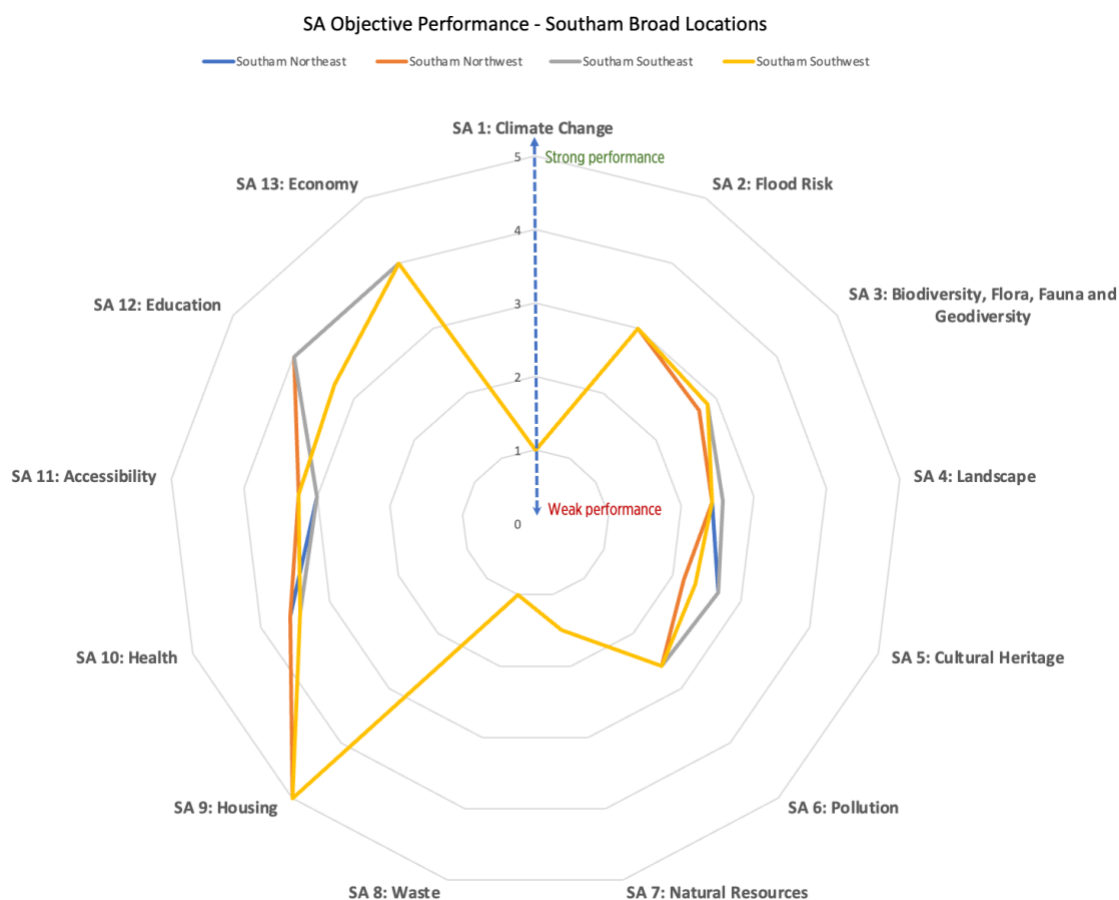
- 4.9.32 Shipston performs well against receptors attributed to SA Objective 13, due to all BLs having good access to employment opportunities. This would have a minor positive impact on the local economy as it is within the sustainable target distance to various business opportunities.
- 4.9.33 The impact of the BLs on employment floorspace provision is uncertain as they are proposed to be situated on previously undeveloped land. No loss of current employment space will be incurred, as well as potential to improve the local economic centres, potentially providing employment opportunities for current and future residents.
- 4.9.34 Shipston North is the best performing BL, being closest BL to two employment opportunities in the local area to Shipston, positively impacting the local economy most easily. **Best performing BL: Shipston North**

4.10 Conclusion – Overall Rank

4.10.1 Shipston West has least environmental constraints. Shipston North has good service provision in the target distances.

SHIPSTON-ON-STOUR	East	North	South west	West
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.				
Flood risk Plan for anticipated levels of climate change.				Best
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.	Best			
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.			=Best	=Best
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.				Best
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.				Best
Natural resources Protect and conserve natural resources including soil, water and minerals.				Best
Waste Reduce waste generation and disposal and support sustainable management of waste.				
Housing Provide affordable, high quality and environmentally sound housing for all.				
Human Health Safeguard and improve community health, safety and wellbeing.				
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.	=Best	=Best		
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.		Best		
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.		Best		

4.11 Southam



SA Objective 1: Climate Change

- 4.11.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective.

SA Objective 2: Flood Risk

- 4.11.2 All four BLs coincide with small and infrequent areas of high surface water flood risk, which could have a negligible impact on flooding. Coincidence with surface water flood risk areas can be effectively mitigated with the use of SuDS. Small proportions of all of the BLs partially coincide with Flood Zone 3, presenting a negligible effect in terms of flood risk. Due to the low levels of coincidence, the flood zone can be avoided.
- 4.11.3 Southam Northeast performs the best in terms of flood risk due to having the smallest proportion of the site coinciding with Flood Zone 3. **Best performing BL: Southam Northeast**

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.11.4 Southam performs reasonably well against SA Objective 3, with no SACs, SSSIs, NNRs, LNRs or Priority Habitats located within close proximity to the BLs, meaning there is little chance of direct adverse effects arising on the biodiversity, flora, fauna, or geodiversity at these designated sites.

4.11.5 Southam Northwest is located in close proximity to Thorpe Rough Ancient Woodland, possibly leading to adverse impacts. Southam Northeast coincides with 'Southam Bypass Cutting' LWS, also resulting in a minor adverse impact. These minor adverse impacts can be most likely be mitigated through the layout design of future proposals and the inclusion of appropriate buffers.

4.11.6 The best performing BL in the settlement is Southam Southeast, as it is the only BL which does not coincide in any way with an LWS. However, none of the BLs are especially or obviously constrained by biodiversity receptors. **Best performing BL: Southam Southeast**

SA Objective 4: Landscape

4.11.7 All BLs are likely to contribute to urban sprawl and impacts are likely to affect views from the existing PRow network.

4.11.8 Only Southam Northwest is coincident with a landscape character area that could be enhanced according to the 1993 Landscape Guidelines: Feldon Character Area. This implies that there is potentially some sort of capacity for change in these areas albeit that the emphasis should be on enhancement. The age of the 1993 document is also relatively old and needs to be updated.

4.11.9 Landscape sensitivity data shows that Southam Southeast is in an area of medium landscape sensitivity. Minor adverse effects are expected which could be mitigated through appropriate design of the development. The other three BLs each contain substantial quantities of high/medium and high sensitivity land parcels. This will be more challenging to mitigate and major adverse effects are anticipated. **Best performing BL: Southam Southwest**

SA Objective 5: Cultural Heritage

4.11.10 All BLs are located within close proximity with 'Southam Conservation Area' which would lead to a minor adverse impact on the setting of this Conservation Area. The minor adverse impact could be mitigated through landscape led design and further heritage assessment to help conserve and enhance the setting of the Conservation Area.

4.11.11 Broad Location South Northwest coincides with the Scheduled Monument 'The Holy Well'. As a result, a major negative impact would be expected on the setting of this SM. Southam Southwest is in close proximity to the same feature and minor adverse impacts on setting are likely.

4.11.12 Southam Northeast and Southam Southeast are the best performing BLs despite being within close proximity to Grade II Listed Buildings, in comparison to Southam Northwest and Southam Southwest, which coincide with Grade II Listed Buildings. Major adverse impacts are more challenging to mitigate than minor adverse effects. **Best performing BL: Southam Northeast.**

4.11.13 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

4.11.14 All BLs are likely to result increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.

- 4.11.15 All BLs are adjacent to the watercourses 'River Stowe' and 'River Itchen', which may lead to the development proposals polluting the watercourses. This minor adverse impact can be effectively mitigated through the use of SuDS and GI to reduce the impact during the operation of the development.
- 4.11.16 All BLs are located in close proximity to a main road, which will lead to a minor adverse impact in terms of increased air, noise and light pollution. Mitigation can be achieved through the implementation of green buffers to improve air quality, as well as avoiding the impacts through appropriate layout design of the development.
- 4.11.17 All of the BLs perform very similarly in all of the SA Objective 6 receptors, there is **no best performing BL**.

SA Objective 7: Natural Resources

- 4.11.18 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.11.19 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.11.20 Southam SE performs marginally best as it is only partially coincident with an MSA; the other BLs coincide wholly with the MSA. Mitigation would only be partially possible by seeking to retain areas of land for greenspace use. **Best performing BL: Southam Southeast**

SA Objective 8: Waste

- 4.11.21 See **Section 4.8**.

SA Objective 9: Housing

- 4.11.22 See **Section 4.9**.

SA Objective 10: Health

- 4.11.23 All BLs located are within the sustainable target distance of PRoW/cycle paths and greenspaces. This would result in human wellbeing being positively impacted at all BLs. However, all BLs are outside the sustainable distance from a hospital with an A&E facility.
- 4.11.24 All BLs are partially within the target distance for GPs, Southam Southwest being the BL with the largest area of coincidence. Southam Southeast and Southam Southwest are outside the sustainable target distance to a leisure facility which would have a minor impact on health.
- 4.11.25 All of BLs coincide with or are located in close proximity to a main road which presents a minor adverse impact on air quality and noise pollution. This minor adverse impact can be mitigated through the implementation of green buffers to protect and enhance air quality, and human wellbeing. **Best performing BL: Southam Northeast and Northwest**.

SA Objective 11: Accessibility

- 4.11.26 All BLs are outside the sustainable target distance from railway stations. This is a minor adverse effect that can only be addressed with infrastructure changes.

- 4.11.27 All BLs are with the target distances for bus stops and food stores, which is a positive effect.
- 4.11.28 Southam Northwest and Southam Southwest have moderate connectivity to the wider plan area (Grade C connectivity). Southam Northeast and Southam Southeast have poor connectivity which will be a minor adverse impact on accessibility. This can be mitigated through road, pedestrian and cycle network improvements, public transport improvement schemes and increases active travel measures.
- 4.11.29 Southam Southwest is the best performing BL as a greater proportion of this BL is located within the sustainable target distance of a food store than Southam Northwest, meaning the development will have a smaller adverse impact on access to food stores. It should be noted that both BLs are very similar in their suitability for development. **Best performing BL: Southam Southwest**

4.12 SA Objective 12: Education

- 4.12.1 All BLs are within the sustainable target distance to primary, secondary and tertiary education, leading to a minor positive impact on access to education. Southam Northeast performs best, having the largest proportion within the 800m sustainable target distance to a primary school of the BLs in Southam. **Best performing BL: Southam Northeast**

SA Objective 13: Economy

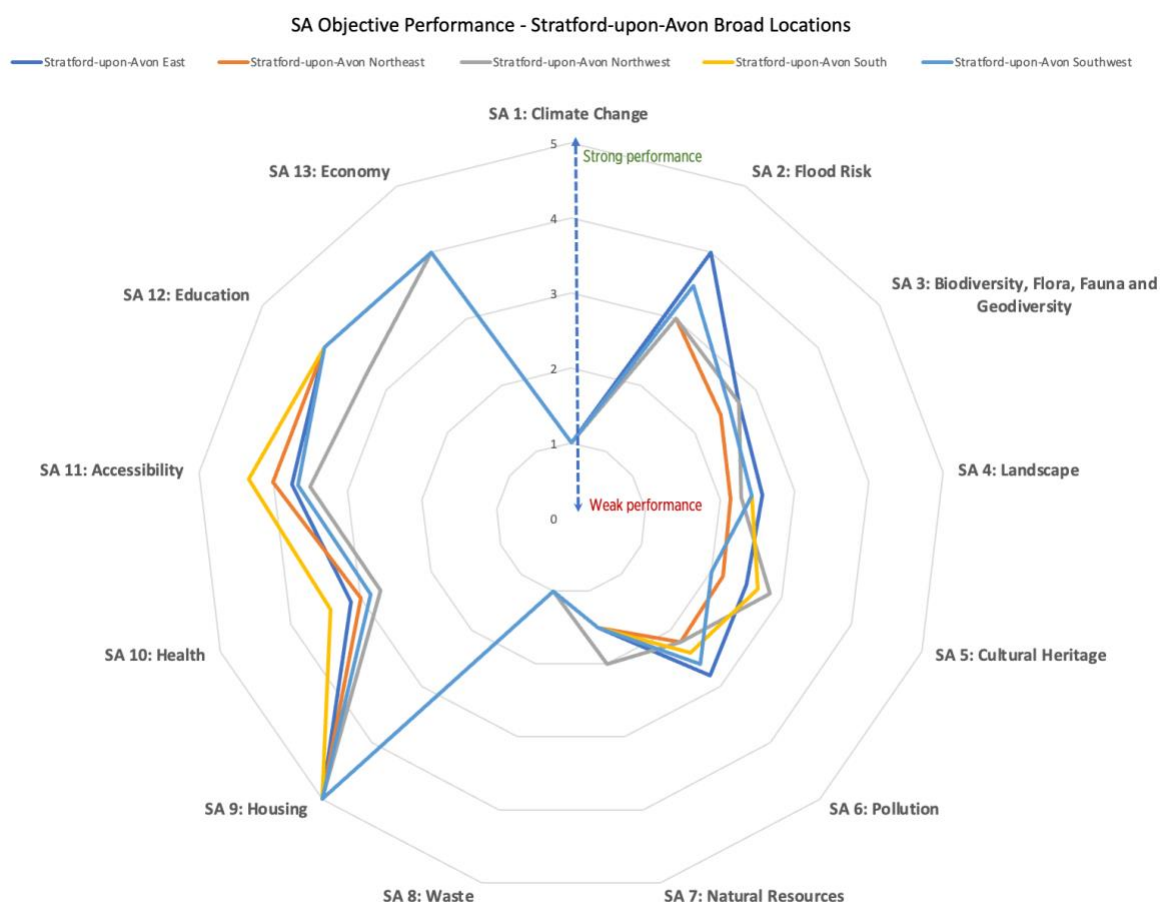
- 4.12.2 Southam performs well against SA Objective 13 performs due to all BLs having good access to employment opportunities. This would have a minor positive impact on residents and the local economy being within the sustainable target distance to various business and employment opportunities.
- 4.12.3 The impact of the BLs on employment floorspace provision is uncertain as they are planned on undeveloped land with no loss of current employment space, as well as potentially boosting the local economic centres.
- 4.12.4 Southam Southwest is the best performing BL, being the closest BL to various employment opportunities in Southam, with greater potential to positively impact the local economy easily. **Best performing BL: Southam Southwest**

4.13 Conclusion – Overall Rank

4.13.1 Southam West performs strongest in terms of access to existing services.

SOUTHAM	North east	North west	South east	South west
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.				
Flood risk Plan for anticipated levels of climate change.	Best			
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.			Best	
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.				Best
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	Best			
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.				
Natural resources Protect and conserve natural resources including soil, water and minerals.			Best	
Waste Reduce waste generation and disposal and support sustainable management of waste.				
Housing Provide affordable, high quality and environmentally sound housing for all.				
Human Health Safeguard and improve community health, safety and wellbeing.	=Best	=Best		
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.				=Best
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.				Best
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.				Best

4.14 Stratford-upon-Avon



SA Objective 1: Climate Change

- 4.14.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective.

SA Objective 2: Flood Risk

- 4.14.2 All BLs coincide with areas of high surface water flood risk. This can be effectively mitigated with SuDS. Also, small proportions of SuA Northeast, SuA Northwest, SuA South and SuA Southwest partially coincide with Flood Zone 3 which is a negligible impact in terms of flood risk as the low levels of coincidence within the BLs means the presence of Flood Zones can be mitigated by designing the layout of the BL so as to avoid the Flood Zones.
- 4.14.3 SuA East performs the best against flood risk due to the BL wholly coinciding with Flood Zone 1, meaning there will be no impact on flood risk in this BL. **Best performing BL: Stratford-upon-Avon East**

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.14.4 All BLs coincide with Priority Habitats to varying degrees. Priority habitats not available for mapping include the network of hedgerows that cross all BLs. Biodiversity Net Gain strategies may be used to avoid no net loss. Veteran Tree data was not available and site visits would be helpful to collect further data.

- 4.14.5 SuA Southwest is located in close proximity to Racecourse Meadow SSSI introducing a potential minor adverse impact through urban edge effects associated with increased access, air pollution and disturbance to the meadow by dog walking. On a more precautionary basis, SuA South could possibly also affect the SSSI.
- 4.14.6 SuA Northwest located in close proximity to Ancient Woodland. Minor adverse impacts may be expected on these designated sites, however there is no direct public access and the woodland stands on rising land some way away from the edge of the BL. Nevertheless, sensitive layout and design of GI would help mitigate potential adverse effects.
- 4.14.7 SuA Northeast coincides with a Welcombe Hills LNR, and SuA Northwest is not far from the same LNR. A significant area of the LNR is coincident with the NE BL and mitigation would be complex and very likely require compensation habitat, larger in area, to be created elsewhere.
- 4.14.8 SuA Northeast, SuA Northwest, SuA South and SuA Southwest also coincide with LWSs, leading to major adverse impacts on these locally designated sites. These impacts can be mitigated through complete avoidance by way of suitable location and layout design of future proposals.
- 4.14.9 **All BLs are constrained in some way;** SoA North West and SoA East are probably the least constrained; both can comfortably avoid compromising the LWS (NW only) and Priority Habitats present.

SA Objective 4: Landscape

- 4.14.10 With the exception of SuA East, all BLs are likely to contribute to urban sprawl. Minor impacts are also likely to affect views from the existing PRow network. However, there is a lack of PRow in SuA Northwest and SuA East whilst SuA Northeast has paths and bridleways that connect with the Welcombe Hills Country Park including the Monarch's Way.
- 4.14.11 SuA Northeast is in close proximity to Welcombe Hills Country Park and minor adverse impacts could affect the present open air recreational experiences that can be had at the park including views out from the park.
- 4.14.12 Three BLs are coincident with landscape character areas that could be enhanced according to the 1993 Landscape Guidelines: SuA Northeast, South and Southwest. This implies that there is potentially some sort of capacity for change in these areas albeit that the emphasis should be on enhancement.
- 4.14.13 Landscape sensitivity is high at all of the BLs, apart from SuA East. These adverse impacts will be difficult to avoid. Partial mitigation may be achieved using greenspace and sensitive design in the developments. Additional surveys are required to understand latest sensitivity qualities at each BL (see **Chapter 12**). **Best performing BL: Stratford-upon-Avon East**

SA Objective 5: Cultural Heritage

- 4.14.14 SuA South and SuA Southwest are both in close proximity to a Grade I Listed Building representing a possible major impact on setting. SuA Northeast coincides with a Grade II* and is in proximity to another; this is likely to lead to major adverse effects. The same BL coincides with and is adjacent to various Grade II Listed Buildings.

- 4.14.15 Every BL is located within close proximity to a Grade II Listed Building, with Stratford-upon-Avon Southwest also located adjacent to an RPG which presents a minor adverse impact. These major and minor adverse impacts on the setting and location of these heritage assets can potentially be mitigated through appropriate location and layout design of the development. Major effects such as coincidence with heritage features are more challenging to resolve.
- 4.14.16 SuA East is located adjacent to or within very close proximity to 'Tiddington Roman Settlement' SM; a minor adverse effect could be expected which would require mitigation through design and layout.
- 4.14.17 SuA East, SuA Northeast, SuA South and SuA Southwest coincide or are located in close proximity to 'Clopton Bridge' CA. This will probably lead to minor adverse impacts on the setting of the CA. Minor adverse impacts on CAs and SMs could be mitigated through landscape-led design and avoidance through appropriate layout design of the development.
- 4.14.18 Stratford-upon-Avon Northwest a minor adverse on two Grade II Listed Buildings. **Best performing BL: Stratford-upon-Avon Northwest.**
- 4.14.19 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

- 4.14.20 All BLs are likely to result increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.14.21 All BLS either coincide or are very close to the AQMA. SuA Northeast, SuA Northwest and SuA South are also located in close proximity to a main road. SuA Northwest coincides with a railway line, with all leading to a minor adverse impact on air and noise pollution. Minor adverse impacts can be mitigated through the implementation of green buffers to improve air quality, as well as avoiding the impacts through the location and appropriate layout design of the development.
- 4.14.22 SuA Northwest, SuA South and SuA Southwest coincide with or are adjacent to a watercourse and SuA Northeast coincides with a Groundwater SPZ. Coincidences or developments adjacent to watercourses or SPZs may lead to the proposed developments polluting the watercourses but this can be effectively mitigated through the use of SuDS and GI to reduce the impact during the operation of the development. Stratford-upon-Avon is the best performing BL, coinciding with and located close to the lowest number of receptors, reducing the likely effects of pollution. **Best performing BL: Stratford-upon-Avon East**

SA Objective 7: Natural Resources

- 4.14.23 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.

4.14.24 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.

4.14.25 Stratford-upon-Avon Northwest is the best performing BL due to being the only BL in the settlement which does not coincide with an MSA. **Best performing BL: Stratford-upon-Avon Northwest**

SA Objective 8: Waste

4.14.26 See **Section 4.8**.

SA Objective 9: Housing

4.14.27 See **Section 4.9**.

SA Objective 10: Health

4.14.28 All BLs are located outside of the sustainable target distance of a hospital with an A&E facility. All BLs are also outside of the target distance for a leisure facility. SuA East, SuA Northeast, SuA Northwest and SuA Southwest will be outside the sustainable target distance to a GP surgery, meaning human wellbeing would be adversely impacted. This minor adverse impact can be mitigated through the increased provision of these services.

4.14.29 SuA East, Northeast and South are within the sustainable distance from a greenspace. All BLs are in the sustainable distance for PRoWs/Cycle Path Networks. SuA Northeast, SuA Northwest and SuA South are all within close proximity to main roads and all the BLs are within close proximity to an AQMA, with both presenting minor adverse impacts on air and noise pollution. Mitigation can be achieved by the implementation of green buffers around developments.

4.14.30 Stratford-upon-Avon South is the best performing BL in the settlement, being the only BL within the sustainable target distance of a GP surgery. **Best performing BL: Stratford-upon-Avon South**

SA Objective 11: Accessibility

4.14.31 SuA performs moderately against SA Objective 11. SuA Northeast, SuA Northwest, SuA South and SuA Southwest are located outside the sustainable target distance from a bus stop, and SuA East and SuA South are located outside the sustainable target distance from a railway station, resulting in minor adverse impacts expected on the site end users' access to public transport. Mitigation is possible through improvements to public transport provisions.

4.14.32 SuA East, SuA Northeast, SuA Northwest and SuA Southwest are located outside the sustainable target distance from a food store, presenting a minor adverse impact on access to food stores. Inclusion of food stores in the layout of future development would be expected to effectively mitigate the associated minor adverse impacts.

4.14.33 Stratford-upon-Avon Northeast is the best scoring BL with moderate connectivity to the wider plan area. Other BLs have very poor connectivity, which would lead to a major adverse impact on connectivity for site end users. **Best performing BL: Stratford-upon-Avon Northeast**

SA Objective 12: Education

- 4.14.34 All BLs are wholly within the target distance to post-16 (tertiary education) and primary education, representing a minor positive impact on site end users' access to these scales of education. Only Stratford Northwest does not have access to secondary education within the target distance.
- 4.14.35 **Best performing BL: Stratford-upon-Avon East, Northeast and South**

SA Objective 13: Economy

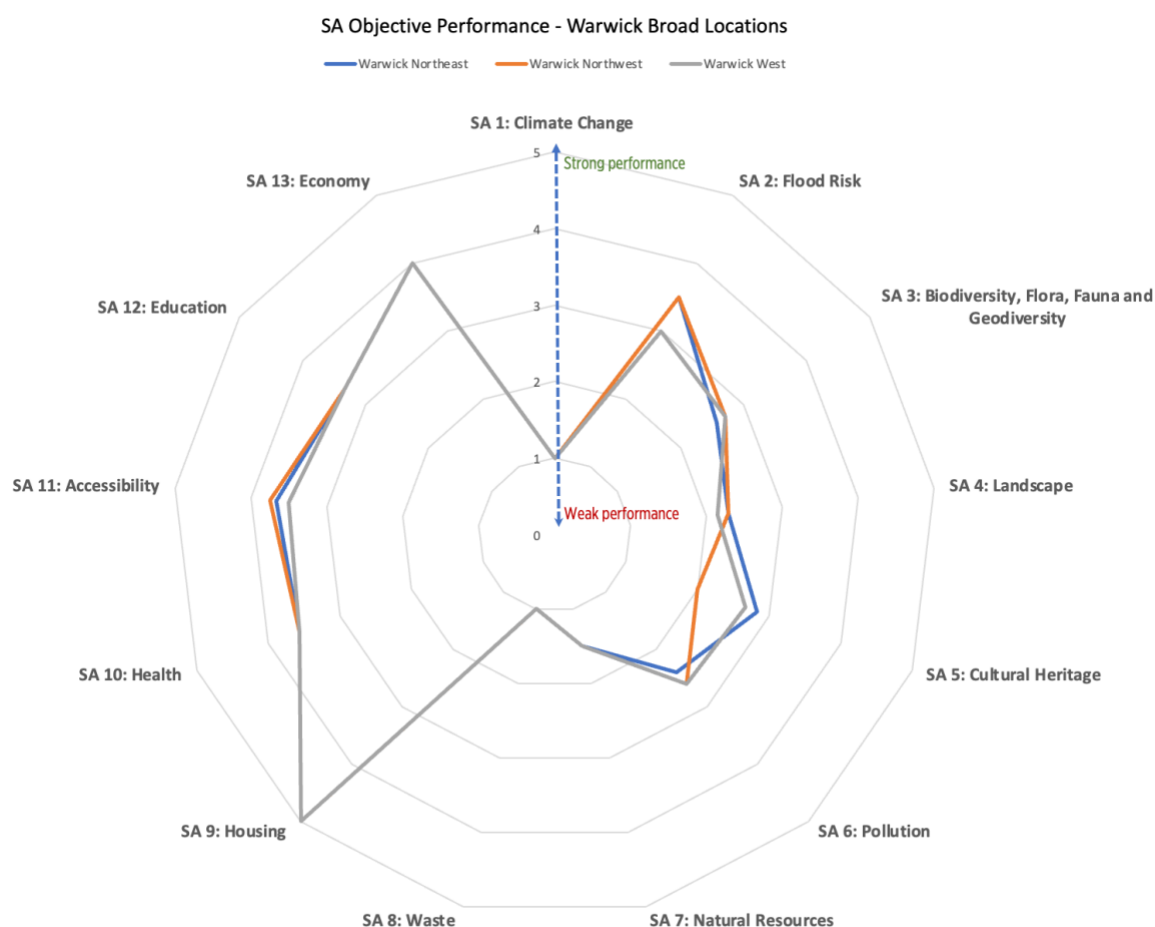
- 4.14.36 SuA performs well against SA Objective due to all BLs having good access to employment opportunities. This would have a minor positive impact on site end users and the local economy as it is within the sustainable target distance to various business opportunities.
- 4.14.37 The impact of the BLs on employment floorspace provision is uncertain as they are planned to be developed on undeveloped land, resulting in no loss of current employment space and potential to boost local economic centres.
- 4.14.38 Stratford-upon-Avon Northeast is the best performing BL, being closest to various employment opportunities in Stratford-upon-Avon, positively impacting the local economy most readily. **Best performing BL: Stratford-upon-Avon Northeast**

4.15 Conclusion – Overall Rank

4.15.1 Stratford-upon-Avon East is least constrained overall in terms of environmental receptors.

STRATFORD-upon-AVON	East	North east	North west	South	South west
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.					
Flood risk Plan for anticipated levels of climate change.	Best				
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.					
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.	Best				
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.			Best		
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.	Best				
Natural resources Protect and conserve natural resources including soil, water and minerals.			Best		
Waste Reduce waste generation and disposal and support sustainable management of waste.					
Housing Provide affordable, high quality and environmentally sound housing for all.					
Human Health Safeguard and improve community health, safety and wellbeing.				Best	
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.		Best			
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.	=Best	=Best		=Best	
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.		Best			

4.16 Warwick



SA Objective 1: Climate Change

- 4.16.1 All BLs perform similarly against SA Objective 1. See **Section 4.3** for further commentary on the assessment of this objective

SA Objective 2: Flood Risk

- 4.16.2 All BLs coinciding with small areas (less than 10%) of high surface water flood risk, presenting a negligible adverse impact on surface water flooding. This impact associated with flood risk can be mitigated with the use of SuDS. Also, small proportions of Warwick Northwest and Warwick West partially coincide with Flood Zone 3, which is a negligible impact in terms of flood risk. Due to the low levels of coincidence at the BLs, the Flood Zone can be avoided with effective design in the location and layout of the development.
- 4.16.3 Warwick Northeast performs best in terms of flood risk due to the BL wholly coinciding with Flood Zone 1, meaning there will be no expected impacts associated flood risk in this BL.
Best performing BL: Warwick Northeast

SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 4.16.4 Warwick performs reasonably well against SA Objective 3, with no SACs, SSSIs, NNRs, LNRs and LGSs within close proximity to any of the BLs. As a result, no adverse impacts on the biodiversity, flora, fauna, or geodiversity at these designated sites would be expected. All BLs coincide with priority habitats, as well as Warwick Northeast and Warwick West located in close proximity to Ancient Woodland, leading to possible adverse impacts..
- 4.16.5 All BLs coincide with LWSs, leading to major adverse impacts on the locally designated sites. To mitigate these impacts, avoidance or buffers may be used to minimise or remove associated adverse impacts. **Best performing BL: Warwick West**

SA Objective 4: Landscape

- 4.16.6 Warwick West would be likely to increase the risk of coalescence between 'Warwick' and 'Hampton on the Hill', with these minor adverse impacts being difficult to mitigate. Mitigation may be possible using greenspace in the developments or through creating a robust settlement edge.
- 4.16.7 Each will possibly lead to urban sprawl as all BLs are in open agricultural landscapes. Warwick West will have the least impact on views from PRoW.
- 4.16.8 The BLs lie in different character types and only Warwick West includes any landscape recommended for enhancement.
- 4.16.9 There is no landscape sensitivity data available. Additional surveys are required to understand latest sensitivity qualities at each BL (see **Chapter 12**). Desktop analysis of OS mapping and other sources suggests that Warwick West is perhaps the least sensitive as it is in close proximity to the M40 motorway. **Best performing BL: Warwick West**

SA Objective 5: Cultural Heritage

- 4.16.10 Warwick Northwest coincides with a Grade II* Listed Building; Warwick Northwest and Warwick West coincide with a Grade II Listed Building. Development at these BLs could lead to major adverse impacts to the heritage assets in question.
- 4.16.11 Warwick Northeast and Warwick West are both in proximity to Grade II Listed Buildings. A minor adverse impact on the setting of heritage features is likely. The identified adverse impacts can be mitigated through avoiding the heritage assets and introducing appropriate design of the location and layout of future developments. Mitigation for major impacts maybe more challenging and not always possible.
- 4.16.12 Warwick West is located in close proximity to a CA which could lead to a minor impact.
- 4.16.13 Warwick Northwest coincides with 'Guys Cliffe' RPG, causing a major adverse impact to the setting of this RPG.
- 4.16.14 Warwick Northeast is the best performing BL. It is in proximity to a Grade II Listed Building and only located in distant proximity to a Grade II* Listed Building. **Best performing BL: Warwick Northeast.**
- 4.16.15 A Heritage and Settlement Sensitivity Assessment has been undertaken which will provide further evidence to inform the appraisal of potential impacts on cultural heritage. The assessment was not available for use at the time of undertaking the assessment of Broad Locations.

SA Objective 6: Pollution

- 4.16.16 All BLs are likely to result increases in air pollution through increased traffic levels and vehicular travel. As the BLs have the capacity for up to 2,000 homes, an increase in local air pollution is possible. Further research is needed to confirm this.
- 4.16.17 All BLs are adjacent to watercourses including the 'Grand Union Canal' and River Avon, which may lead to proposed developments polluting the watercourses during their operation. This can be mitigated through the use of SuDS and GI to reduce the impact during the operation of the development.
- 4.16.18 All BLs are located within close proximity to a main road, which will lead to a minor adverse impact on air and noise pollution. Mitigation for air and noise pollution can be mitigated through the implementation of green buffers to improve air quality, as well as avoiding the impacts through the effective design and layout of the development.
- 4.16.19 All BLs perform very similarly against all SA Objective 6 receptors.

SA Objective 7: Natural Resources

- 4.16.20 All BLs situated on previously undeveloped land and thus adversely impacting land with potential environmental qualities that provide ecosystem services and contribute to environmental capital. Previously undeveloped land would be lost with development and very likely represent an irreversible impact.
- 4.16.21 All BLs are primarily situated on BMV land including ALC Grade 3 land, which is assumed to be ALC Grade 3a as classification sub-division is not available. The loss of agricultural land and BMV soils is very difficult to mitigate or compensate, even with land being used for GI and soils, due to BMV soil loss being a long-term, permanent impact.
- 4.16.22 Warwick West is the best performing site due to around half of the site area being covered by an MSA, with the majority of the other BLs' area wholly coinciding with it. **Best performing BL: Warwick West**

SA Objective 8: Waste

- 4.16.23 See **Section 4.8**.

SA Objective 9: Housing

- 4.16.24 See **Section 4.9**.

SA Objective 10: Health

- 4.16.25 All BLs are located within the sustainable target distance of a hospital with an A&E. Likewise for access to PRoW/cycle path networks. All of which would lead to minor positive impacts on human health.
- 4.16.26 Only Warwick NW doesn't meet the sustainable target distance for access to a GP Surgery, whilst all BLs are outside of the target distance for leisure facilities, leading to minor adverse impacts on human health. This can be mitigated through improvements to sustainable access to public transport. Only Warwick West is in the target distance for greenspace.
- 4.16.27 All BLs coincide with main roads, which could lead to a minor adverse impact on health due to noise and air pollution. This can be mitigated through the implementation of green buffers to improve air quality.

- 4.16.28 Warwick West is the best performing BL, as just under half of the site area is located within the sustainable target distance to a GP Surgery, meaning less mitigation would be required for all site end users to have sustainable access to GP Surgeries. **Best performing BL: All equal.**

SA Objective 11: Accessibility

- 4.16.29 All Warwick BLs are situated inside of the sustainable target distance of a bus stop and a train station, which are both good factors for positive sustainability performance.
- 4.16.30 Only Warwick Northwest meets the target distance criteria for a local food shop. A minor adverse impact would be expected on accessibility to site end users requiring access to local services in the Northwest and Northwest BLs. However, this can be mitigated through public transport improvement schemes and the inclusion of food stores within development plans.
- 4.16.31 Connectivity is very poor in Warwick West predominantly ranking as Grade E, which will present a major adverse impact on transport for site end users. Poor connectivity can be mitigated through road and pedestrian and cycle network improvements, active travel provision and public transport improvement schemes. It should be noted here that connectivity data for Warwick Northeast was unavailable, therefore the impact of the site on connectivity to the wider plan area is uncertain. Warwick Northwest is the best scoring BL, only presenting a minor adverse impact on connectivity (Grade D) to the wider SWLP area. **Best performing BL: Warwick Northwest**

SA Objective 12: Education

- 4.16.32 All BLs are wholly within the target distance to post-16 (tertiary education) and primary education, representing a minor positive impact on site end users' access to these scales of education. Only Warwick Northeast has access to secondary education within the target distance. **Best performing BL: Warwick Northeast**

SA Objective 13: Economy

- 4.16.33 Warwick as a settlement performs well against SA Objective 13, due to all BLs having good access to employment opportunities. This would have a minor positive impact on the local economy as it is within the sustainable target distance to various business and employment opportunities. The impact of the BLs on employment floorspace provision is uncertain as they are planned to be developed on previously undeveloped land, resulting in no loss of current employment space and potential to boost local economic centres.
- 4.16.34 Warwick Northeast is the best performing BL, being the closest BL to various employment opportunities in Warwick and likely to positively impact the local economy most easily. However, all BLs are located within close proximity to a number of employment opportunities, so would also be likely to positively impact the local economy as well. **Best performing BL: Warwick Northeast**

4.17 Conclusion – Overall Rank

4.17.1 Warwick East and Warwick West both perform well overall.

WARWICK	North east	North west	West
Climate change Reduce the SWLP authorities' contribution towards the causes of climate change.			
Flood risk Plan for anticipated levels of climate change.	Best		
Biodiversity and geodiversity Protect, enhance and manage biodiversity and geodiversity.			Best
Landscape Protect, enhance and manage the quality and character of landscapes and townscapes.			Best
Cultural heritage Protect, enhance and manage sites, features and areas of archaeological, historical and cultural heritage importance.	Best		
Environmental Pollution Mitigate adverse impacts from existing air, water, soil and noise pollution and avoid generating further pollution.			
Natural resources Protect and conserve natural resources including soil, water and minerals.			Best
Waste Reduce waste generation and disposal and support sustainable management of waste.			
Housing Provide affordable, high quality and environmentally sound housing for all.			
Human Health Safeguard and improve community health, safety and wellbeing.	=Best	=Best	=Best
Accessibility Improve accessibility, increase the proportion of travel by sustainable modes and reduce the need to travel.		Best	
Education Increase access to education and improve attainment to develop and maintain a skilled workforce.	Best		
Economy Ensure sufficient employment land and premises are available to develop and support diverse, innovative and sustainable growth.	Best		

4.18 Quantitative analysis at the Broad Locations

4.18.1 Some receptors lend themselves to quantitative analysis. The following receptor information helps to demonstrate how the granularity of assessment can be improved with more detail. Other receptors, such as evaluating the setting of a listed building is qualitative and therefore harder to objectively rank.

ALC distribution across the Broad Locations

4.18.2 Nine BLs have more than 20 hectares of ALC Grade 2 land: Kenilworth North, Kenilworth Northeast, Kenilworth Southeast, RLS Northeast, RLS Northwest, Southeast, Shipston East, Stratford-upon-Avon East, Stratford-upon-Avon South.

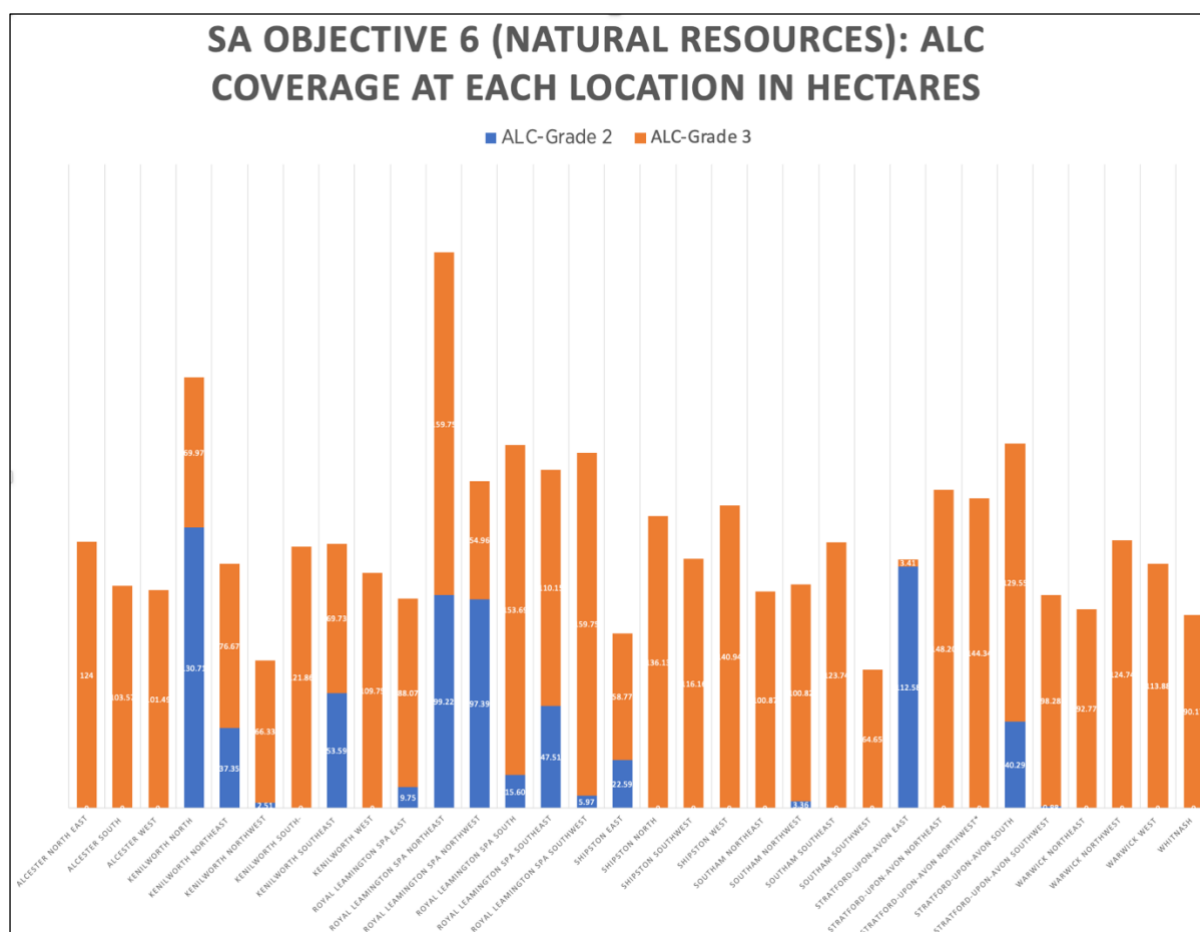


Figure 4.2: Agricultural Land Classification values for land at the Broad Locations expressed in hectares as part of each BL

Priority Habitat distribution across the Broad Locations

4.18.3 Priority habitats make up one of the key receptors that are used to help evaluate SA performance in terms of impacts that reasonable alternative broad locations might have on them. Most Broad Locations have low quantities of Priority Habitat which is possibly a reflection of the way in which lowland England is farmed. However, three locations have more than 20ha of Priority Habitat: RLS Southeast, Kenilworth SE and Kenilworth North (see **Figure 6.2**). Figure 6.3 illustrates the variation in priority habitat type that can be found across the BLs.

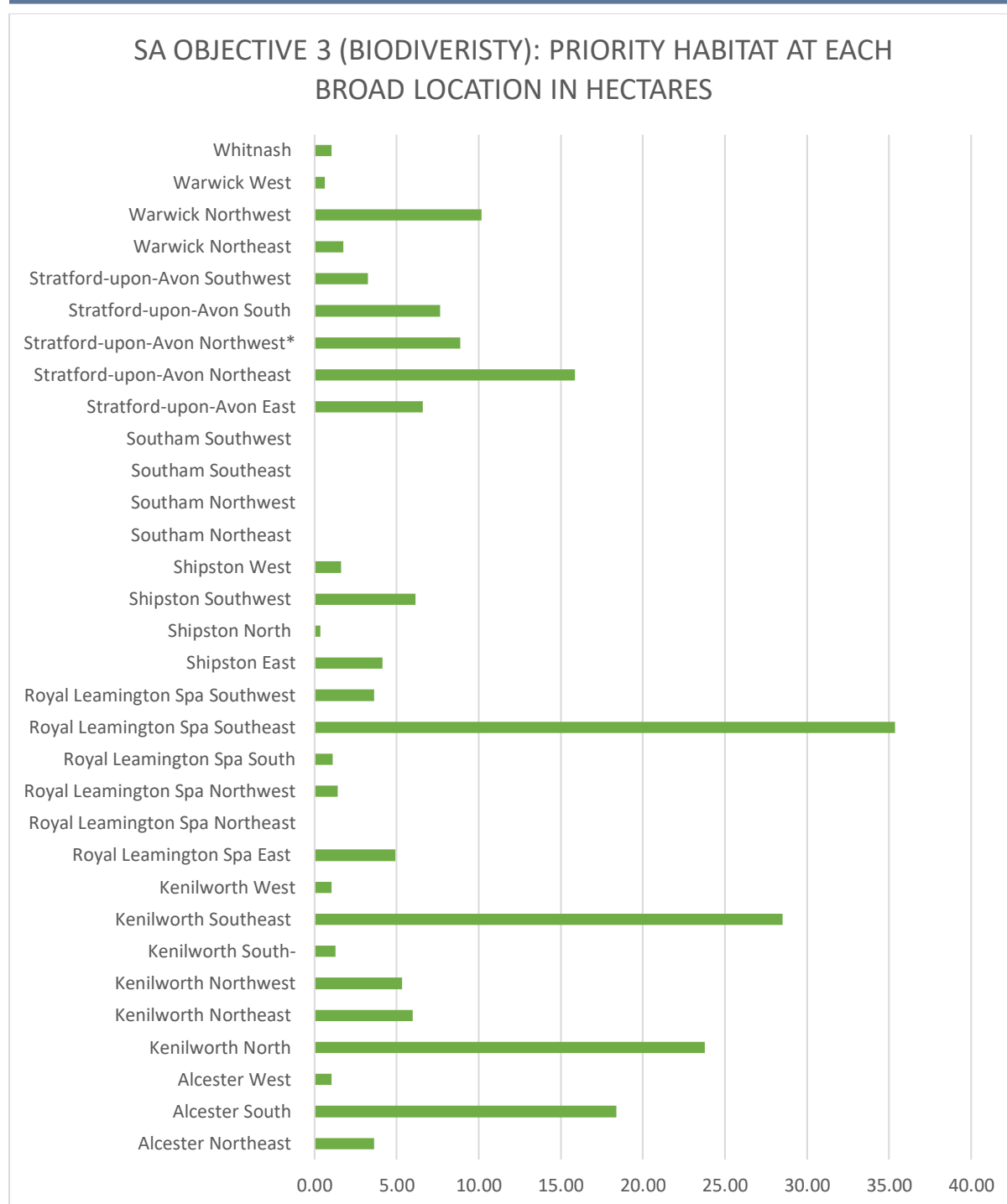


Figure 4.3: Broad Locations have differing quantities of Priority Habitat

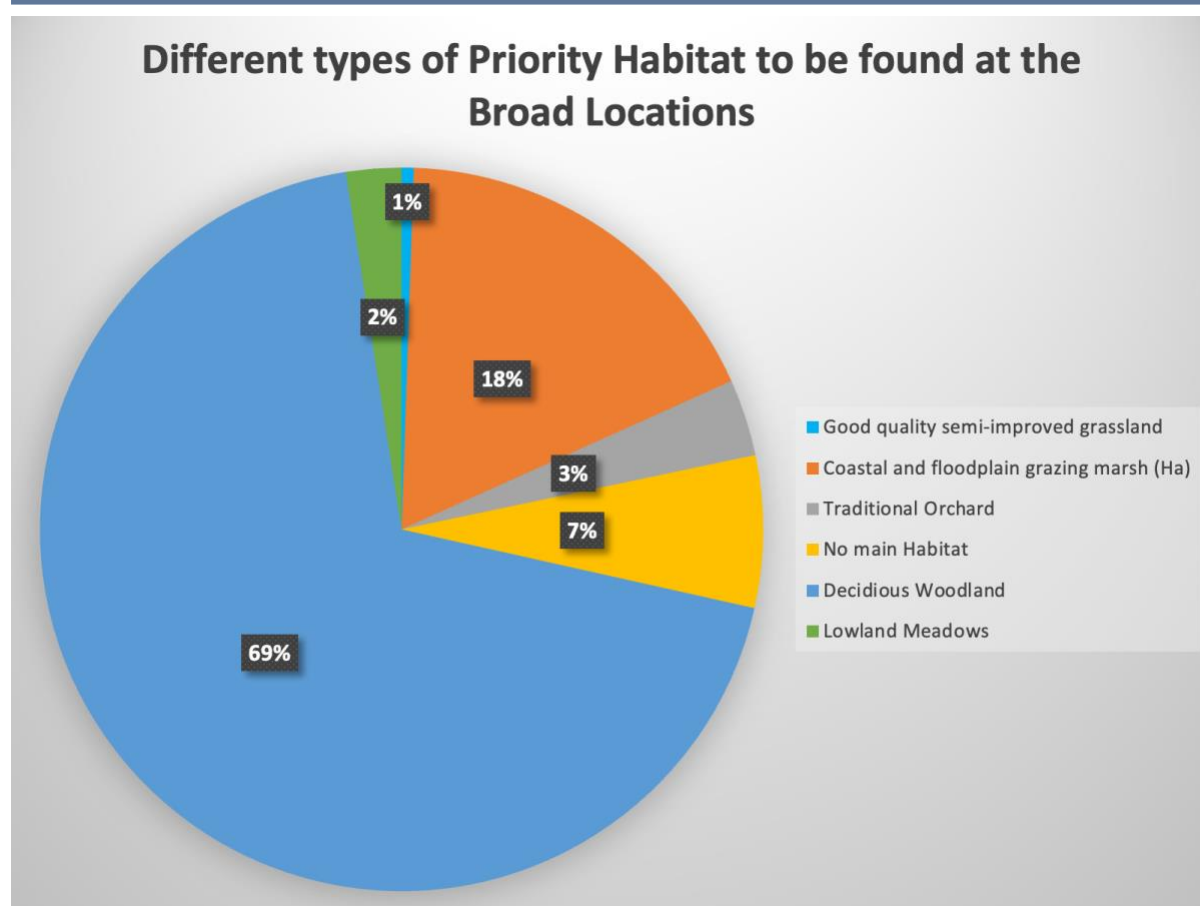


Figure 4.3: Different types of Priority Habitat to be found at the Broad Locations; a similar pattern could be expected for the Small Settlements.

4.19 Summary SA findings for the Broad Locations

4.19.1 **Table 4.1** summarises the assessment findings for the Broad Locations under each SA Objective. It is important to note that each Objective is composed of a number of indicators, as set out in the SA Framework in **Appendix A**. The assessment of each indicator cannot be 'added' to create an overall score as this would give a misleading indication of the level of impacts and the potential for mitigation. The summary table illustrates the worst performing indicator under each Objective. **Appendix B** of the Main Report provides detailed assessments of each indicator under each SA Objective.

Table 4.1: Summary findings for the Broad Locations

Broad Locations	SA Objective												
	SA1: Climate Change	SA2: Flood Risk	SA3: Biodiversity	SA4: Landscape	SA5: Cultural Heritage	SA6: Environmental Pollution	SA7: Natural Resources	SA8: Waste	SA9: Housing	SA10: Health	SA11: Accessibility	SA12: Education	SA13: Economy
Alcester Northeast	--	0	-	-	--	-	--	--	++	-	-	+	+
Alcester South	--	0	-	-	-	-	--	--	++	-	-	+	+
Alcester West	--	0	-	-	-	-	--	--	++	-	-	+	+
Kenilworth North	--	+	--	-	--	-	--	--	++	-	++	+	+
Kenilworth Northeast	--	+	-	-	--	-	--	--	++	-	-	+	+
Kenilworth Northwest	--	+	-	-	--	-	--	--	++	-	-	-	+
Kenilworth South	--	0	-	-	--	-	--	--	++	-	+	-	+
Kenilworth Southeast	--	+	-	-	--	-	--	--	++	-	-	-	+
Kenilworth West	--	+	-	-	--	-	--	--	++	-	-	-	+
Royal Leamington Spa East	--	+	-	-	-	-	--	--	++	-	-	+	+
Royal Leamington Spa Northeast	--	+	-	-	-	-	--	--	++	-	-	+	+
Royal Leamington Spa Northwest	--	+	-	-	-	-	--	--	++	-	-	+	+
Royal Leamington Spa South	--	+	-	-	--	-	--	--	++	-	-	-	+
Royal Leamington Spa Southeast	--	+	--	--	--	-	--	--	++	++	+	+	+
Royal Leamington Spa Southwest	--	0	-	-	--	-	--	--	++	-	-	-	+
Shipston East	--	0	-	--	-	-	--	--	++	-	-	-	+
Shipston North	--	+	-	--	-	-	--	--	++	-	-	-	+
Shipston Southwest	--	0	-	-	-	-	--	--	++	-	-	-	+
Shipston West	--	+	-	-	-	-	--	--	++	-	-	-	+
Southam Northeast	--	0	-	--	-	-	--	--	++	-	-	+	+
Southam Northwest	--	0	-	--	--	-	--	--	++	-	-	+	+
Southam Southeast	--	0	-	-	-	-	--	--	++	-	-	+	+
Southam Southwest	--	0	-	--	--	-	--	--	++	-	-	-	+
Stratford-upon-Avon East	--	+	-	-	-	-	--	--	++	-	-	+	+
Stratford-upon-Avon Northeast	--	0	--	--	--	-	--	--	++	-	++	+	+
Stratford-upon-Avon Northwest	--	0	-	--	-	-	--	--	++	-	-	-	+
Stratford-upon-Avon South	--	+	-	--	-	-	--	--	++	-	++	+	+
Stratford-upon-Avon Southwest	--	+	-	--	--	-	--	--	++	-	-	+	+
Warwick Northeast	--	+	-	-	-	-	--	--	++	-	-	-	+
Warwick Northwest	--	+	-	-	--	-	--	--	++	-	-	-	+
Warwick West	--	0	-	-	-	-	--	--	++	-	--	-	+
Whitnash	--	+	--	-	-	-	--	--	++	-	-	+	+

5 Evaluation of Small Settlement Locations

5.1 The 22 Small Selection Locations

5.1.1 Reasonable alternative development locations have been identified around the following small settlements:

- | | |
|----------------------|-------------------|
| • Barford | • Kineton |
| • Bearley | • Kingswood |
| • Bidford | • Long Itchington |
| • Bishop's Tachbrook | • Radford Semele |
| • Claverdon | • Salford Priors |
| • Cubbington | • South Coventry |
| • Earlswood | • Studley |
| • Hampton Magna | • Wellesbourne |
| • Hatton Park | • Wilmcote |
| • Hatton Station | • Wood End |
| • Henley | • Wootton Waven |

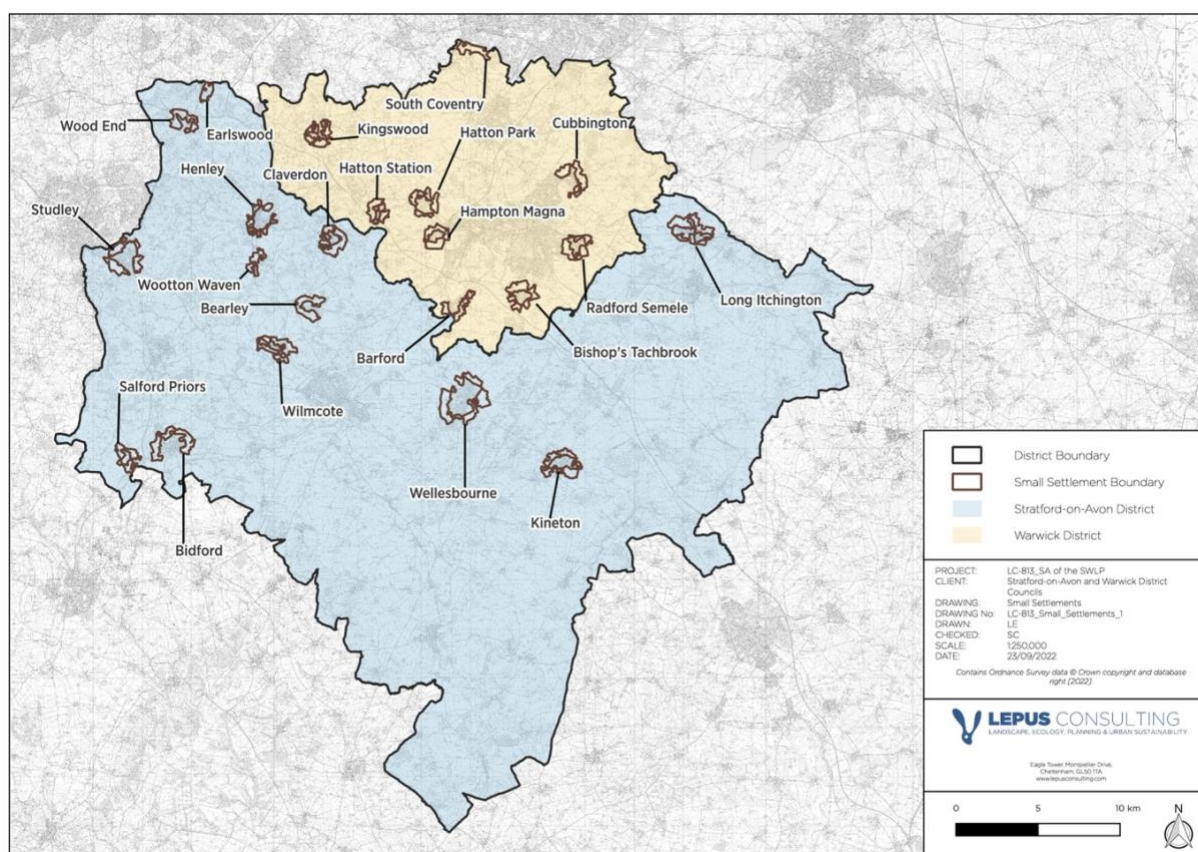


Figure 5.1: Stratford-on-Avon District Council and Warwick District Council administrative boundaries and reasonable alternative small settlement locations for development

5.1.2 The following sections discuss how the different Small Settlement Location perform in terms of each SA Objective.

5.2 Technical data

- 5.2.1 **Appendix C** provides an appraisal of the 22 Small Settlement Locations. Each reasonable alternative has been assessed for likely impacts against the 13 SA Objectives, as outlined in the SA Framework (see **Appendix A**). Likely sustainability impacts have been set out in the tables within each SA Objective, in accordance with the methodology set out in **Chapter 2**.

5.3 SA Objective 1: Climate Change

- 5.3.1 At this stage in the plan making process the number of dwellings to be provided at each Small Settlement Location is unknown. However, for the purpose of this assessment it is assumed that a maximum of 500 new dwellings could be provided at each location.
- 5.3.2 The delivery of additional homes through the SWLP is likely to lead to an increase in Greenhouse Gas (GHG) emissions. Adopting a precautionary approach, and assuming a maximum of 500 homes at each location, an increase in more than 129 dwellings in Warwick District and / or more than 63 dwellings in Stratford-upon-Avon District would result in a 0.1% increase in carbon dioxide emissions in comparison to current levels. Should this scale of development come forward at any location it would result in a minor adverse effect prior to implementation of mitigation. All small settlement locations perform similarly and will lead to significant adverse effects on climate change when measured against this coarse metric.
- 5.3.3 The SWLP seeks to support the creation of 20-minute neighbourhoods where development is located close to local services to meet people's daily needs, reducing the need to travel by private car and encouraging the use of active and public transport. This would in turn lead to a reduction in transport related GHG emissions. In addition, the SWLP will seek to make further reductions in GHG emissions through the adoption of energy efficiency and high sustainability standards for buildings to minimise carbon emissions.
- 5.3.4 Mitigation may be achieved by future policies in the SWLP which will seek to reduce GHG emissions associated with the construction and operation of homes. Impacts can be reduced by implementing low carbon building processes and, materials and operational consideration e.g. Passivhaus; Renewable energy; Modular housing. Higher density developments can make destinations easily accessible by walking or cycling and can bring people together to support local public transport, facilities and local services. Integrated active travel which maximises people's travel choices for low-carbon modes of transport like rail, bus, other public transport, walking and cycling is essential.
- 5.3.5 Support for decentralised, low carbon and renewable energy generation whether on site or standalone renewable energy generation sites will help reduce GHG emissions in the medium and long term.
- 5.3.6 The SWLP climate change study is currently being undertaken and is likely to provide further evidence to assist with the sustainability appraisal process.

Best and worst performing options

- 5.3.7 All small settlement locations would be expected to perform in the same manner in relation to climate change. Consequently, there is no definitive best or worst performing site. Small settlements with a smaller area would have less capacity for development, therefore would be expected to contribute less to climate change than a larger site would.

5.4 SA Objective 2: Flood Risk

- 5.4.1 SA Objective 2 aims to avoid locating development within areas at risk of fluvial or surface water flooding. All small settlement locations are coincident with an area classed as being at high risk of surface water flood flooding. The total proportion of each potential location coincident with an area at high risk of surface water flooding however varies for each location. The total area at risk is less than 10% of the overall site area for all small settlement locations. Therefore, all small settlement locations score similarly against this SA objective, scoring a negligible impact. Surface water flood risk can be mitigated effectively at a local scale through sensitive site design and the incorporation of features such as Sustainable Urban Drainage Systems (SuDS), which will seek to keep runoff to 'greenfield runoff' rates. The incorporation of such features will be promoted through SWLP policy.
- 5.4.2 Whilst the majority of small settlement locations are coincident with a proportion of land designated within Flood Zones 2 and / or 3, the extent of this varies between locations. In all but six small settlement locations, the proportion of the overall site coincidence accounts for less than 10% of the total area and therefore a negligible impact would be expected. The Small Settlement Location at Henley-in-Arden is coincident with a larger area of land designated within Flood Zone 2 (more than 50% of the total site area) and therefore a minor adverse effect would be expected.
- 5.4.3 The impact of flooding can be mitigated through the sensitive design and layout of development within a site, seeking to avoid Flood Zones 2 and 3.

Best and worst performing options

- 5.4.4 The five best performing small settlement locations are those which wholly coincide with Flood Zone 1 and would therefore have a positive impact on flood risk, as listed below:
- Bearley⁸⁹;
 - Claverdon;
 - Earlswood;
 - Hampton Magna; and
 - South Coventry.
- 5.4.5 There is no clearly worst performing small settlement in relation to flood risk. All locations aside from the five best performing as previously listed would be expected to have a negligible effect in terms of flood risk.

5.5 SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 5.5.1 International, national and local biodiversity designations protect a network of important habitats and species across the Plan area. Potential impacts associated with development at the preferred locations will vary depending on the location, nature and scale of development. However, in all case it may include the loss or degradation of designated and supporting habitat.

⁸⁹ Note: small settlement locations are listed alphabetically rather than ranked in order of performance.

- 5.5.2 Habitats sites have the highest level of statutory protection. None of the small settlement locations are coincident with, or in close proximity to, a Habitats site. However, the HRA Report prepared to support the Issues and Options consultation (Lepus, 2022) has identified a number of potential likely significant hydrological⁹⁰ and recreational⁹¹ pathways of impact. It has also identified the presence of potentially functionally linked watercourses within the Plan area. These watercourses are associated with the Severn Estuary and Humber Estuary designations (Special Area of Conservation (SAC) and Ramsar sites), and are particularly important for a number of species of qualifying fish. The potential impact of the SWLP and possible mitigation required will be addressed in more detail through the HRA process. Therefore, at present this impact has been assessed as being uncertain across all small settlement locations.
- 5.5.3 There are no National Nature Reserves (NNRs) located within the Plan area and as such all small settlement locations would have a negligible impact upon these features.
- 5.5.4 As illustrated in **Box 5.1**, three small settlement locations are situated immediately adjacently to a designated Site of Special Scientific Interest (SSSI) (around Bearley, Wilmcote and Wood End) and five are located in close proximity to a SSSI. Development at these locations would have the potential to result in major and/or minor adverse effects.
- 5.5.5 Twelve of the small settlement locations are situated in close proximity to an area of ancient woodland and therefore would have the potential for a minor adverse effect. This may include increased recreational pressures from development, urbanisation impacts, air quality and hydrology impacts.
- 5.5.6 The assessment undertaken has indicated that all small settlement locations coincide with, or are located within close proximity to, a Local Wildlife Site (LWS) which would result in a potential minor adverse effect.
- 5.5.7 As illustrated in **Box 5.1**, 19 small settlement locations coincide with areas of Priority Habitat which would result in potential minor adverse effects. One location, Studley, is coincident with a Local Geological Site (LGS), which would be expected to lead to a minor adverse effect upon protected geological sites.
- 5.5.8 Mitigation which could be adopted at these locations should follow the mitigation hierarchy and may include the avoidance of biodiversity assets and mitigation of impacts through sensitive site selection, design and layout of development. In particular, any development located adjacent to a SSSI would need to ensure there would be no direct or indirect impacts on its features and be sensitively designed to create and enhance the natural environment.
- 5.5.9 Incorporation of green and blue infrastructure into development, and protection and integration of new planting with the Local Nature Recovery Network would help to protect and strengthen the biodiversity resource across the plan and wider area. Such works would create important stepping-stones between protected international, national and local sites. This would also have benefits for delivery of Biodiversity Net Gain and ensure biodiversity receptors are more robust to impacts associated with development and climate change.

⁹⁰ LSEs at the Severn Estuary Special Area of Conservation (SAC), Severn Estuary Special Protection Area (SPA) and Severn Estuary Ramsar, Humber Estuary SAC, Humber Estuary SPA, Humber Estuary Ramsar and Oxford Meadows SAC.

⁹¹ LSEs at Bredon Hill SAC.

Best and worst performing options

- 5.5.10 All of the small settlement locations have the potential to have adverse impacts on biodiversity receptors and there are no readily identifiable Best Performing Options. Bishop's Tachbrook would be expected to require the least in terms of mitigation. Locations at Bearley, Wilmcote and Wood End have been assessed as having potential adverse impacts on SSSIs as well as Ancient Woodland, Local Wildlife Sites and Priority Habitats and therefore are the worst performing under this SA Objective.

Box 5.1: Summary of potential biodiversity receptors

Small settlement locations that are adjacent to a SSSI:	Small settlement locations which coincide with Priority Habitats:	Small settlement locations which are located close to areas of Ancient Woodland:
<ul style="list-style-type: none"> - Bearley - Wilmcote - Wood End 	<ul style="list-style-type: none"> - Barford - Bearley - Bidford - Claverdon - Earlswood - Hatton Park - Hatton Station - Henley - Kineton - Kingswood - Long Itchington - Radford Semele - Salford Priors - South Coventry - Studley - Wellesbourne - Wilmcote - Wood End - Wootton Wawen 	<ul style="list-style-type: none"> - Bearley - Claverdon - Cubbington - Hampton Magna - Hatton Park - Henley - Long Itchington - South Coventry - Studley - Wellesbourne - Wilmcote - Wood End
Small settlement locations that are in close proximity to a SSSI:		
<ul style="list-style-type: none"> - Claverdon - Earlswood - Kineton - Studley - Wellesbourne 		

5.6 SA Objective 4: Landscape

- 5.6.1 Landscape sensitivity studies undertaken to support the Stratford-on-Avon Core Strategy and evaluation desktop evidence, which is naturally limiting, and field work is necessary to complete these assessments. The assessments show that all small settlement locations are within areas of high or high-medium landscape sensitivity and that new development would therefore result in a major adverse effect.
- 5.6.2 In terms of landscape character, all small settlement locations are in an area where new development could potentially be discordant with the character areas, guidelines and characteristics as set out in the 1993 Warwickshire Landscape Guidelines (see **Section 2.8**).

- 5.6.3 Special Landscape Areas (SLAs) comprise areas identified as being of particularly high quality countryside, based on their landscape and scenic quality, as well as natural and historic features. SLA designations apply to SSLs within Stratford-on-Avon only. Twelve of the small settlement locations coincide with a SLAs (see **Box 5.2**). Any future development within these SLAs should respect the character of the landscape and built form and address potential impacts on visual amenity from more sensitive receptors.
- 5.6.4 A total of seven of the 22 small settlement locations (**Box 5.2**) are likely to result in coalescence with neighbouring small settlements and towns. The impact of any future development should therefore seek to mitigate increased risks of urban sprawl through design of development to create a robust settlement edge and a gentle urban-rural transition.

Best and worst performing options

- 5.6.5 All small settlement Locations have been assessed as being within sensitive landscapes and have the potential to adversely impact the landscape. Locations identified in Box 5.2 as having potential to cause coalescence between settlements perform worse than other options. The location at Kineton has the potential to also adversely impact the Cotswolds AONB and therefore this location is worst performing overall.

Box 5.2: Summary of potential landscape receptors

Small settlement locations with potential to coalesce:	Small Settlement Locations that coincide with, are adjacent to or are in proximity to a Special Landscape Area:
<ul style="list-style-type: none"> - Bidford - Bishop's Tachbrook - Hampton Magna - Hatton Park - Radford Semele - South Coventry - Studley 	<ul style="list-style-type: none"> - Bearley - Bidford - Claverdon - Earlswood - Hatton Station - Henley - Kineton - Studley - Wellesbourne - Wincote - Wood End - Wootton Wawen

5.7 SA Objective 5: Cultural Heritage

- 5.7.1 Eight of the 22 small settlement locations are situated within close proximity to a Grade I Listed Building, ten within proximity to a Grade II* Listed Building and all locations are either coincident with or in close proximity to a Grade II Listed Building (see **Box 5.3**). Eleven of the small settlement locations either coincide with or are located within proximity to a Scheduled Monument (SM).

- 5.7.2 There is potential for adverse effects upon Listed Buildings and SMs as a consequence of development. Further information is required as the SWLP develops to clarify the significance of heritage features and potential impacts on significance from development. The Councils are therefore preparing a document to review the significance of heritage assets and potential impacts on significance as a consequence of the SWLP. However, given the extensive nature of the area of search it is possible that potential adverse effects on heritage could be mitigated through avoidance.
- 5.7.3 Ten of the Small Settlement Locations either coincide with, or are adjacent to, a Conservation Area (**Box 5.3**). Three of the small settlement locations, Bishop's Tachbrook, Kingswood and Wellesbourne either coincide with, or are adjacent to a Registered Parks and Gardens and one site, Kineton, coincides with a Registered Battlefield. Potential adverse effects could be avoided through sensitive site selection, layout and design of future development.

Best and worst performing options

- 5.7.4 All small settlement Locations have been identified as having potential adverse impacts on heritage assets. The locations at Radford Semele and Wood End have been identified as potentially having adverse impacts on Grade II Listed Buildings and no other known heritage receptors and are therefore the Best Performing Options at this stage. The Location at Kineton has the potential to have adverse impacts on Grade II* Listed Buildings, Grade II Listed Buildings, Conservation Area and Scheduled Monument, as well as being located within a Registered Battlefield and is therefore the worst performing at this stage.

Box 5.3: Summary of potential cultural heritage receptors

<p>Small settlement locations that either coincide with, are adjacent to or in proximity to a Grade I Listed Building:</p> <ul style="list-style-type: none"> - Bidford - Bishop's Tachbrook - Cubbington - Henley - Salford Priors - Wellesbourne - Wilmcote - Wootton Wawen 	<p>Small settlement locations that either coincide, adjacent to or in proximity to a Grade II* Listed Building:</p> <ul style="list-style-type: none"> - Barford - Claverdon - Hampton Magna - Hatton Park - Hatton Station - Henley - Kineton - Long Itchington - Studley - Wellesbourne - Wootton Wawen
<p>Small settlement locations that coincide with/are adjacent to a Conservation Area:</p> <ul style="list-style-type: none"> - Bearley - Bidford - Claverdon - Henley 	<p>Small settlement locations that coincide with/are located in close proximity to a Scheduled Monument:</p> <ul style="list-style-type: none"> - Barford - Bidford - Earlswood - Hatton Station

- Kineton	- Henley
- Long Itchington	- Kineton
- Salford Priors	- Salford Priors
- Wellesbourne	- South Coventry
- Wilmcote	- Studley
- Wootton Wawen	- Wellesbourne
	- Wootton Wawen

5.8 SA Objective 6: Environmental Pollution

5.8.1 SA Objective 6 looks at a number of pathways of pollution (e.g. a change in air quality) and also receptors to pollution (e.g. future residents, habitats and watercourses). South Coventry is the only location which is located within an AQMA (the Coventry City-Wide AQMA). Hampton Magna is the only location which is coincident with a groundwater SPZ, with the south west section of this location being coincident with a SPZ 1, 2 and 3. A number of small settlement locations lie close to either a main road and / or a railway line. These features pose a potential source of noise and air quality pollution and vibration for future residents. Future development (both through construction and operational phases of development) has the potential to impact upon watercourses which flow within close proximity to some of the small settlement locations through contamination of surface water run-off.

5.8.2 At this stage of SWLP preparation process, it is assumed that potential pollution impacts can be mitigated through avoidance and mitigation. This could be achieved through the adoption of strong policy wording around the protection of water (for example incorporation of SuDS and the protection of Good Ecological Status) and protection of air quality, alongside the sensitive design and layout of buildings, implementation of principles such as those associated with '20-minute neighbourhoods' and the promotion of active and sustainable transport choices which will reduce traffic related emissions to air and noise.

Best and worst performing options

5.8.3 Small settlements Cubbington and Earlswood are the only locations which have been assessed as having a negligible impact on pollution. Therefore, these are the two best performing options. Hampton Magna is the worst performing site, with adverse impacts expected in relation to proximity to main roads, railway lines, effects on watercourse quality and GPZs.

Box 5.4: Summary of potential pollution receptors

Small settlement locations in proximity to a main road:	Small settlement locations in proximity to a railway line:	Small settlement locations that coincide with a watercourse:
- Barford	- Bearley	- Barford
- Bearley	- Hampton Magna	- Bidford
- Bishop's Tachbrook	- Hatton Park	- Bishop's Tachbrook
- Claverdon	- Hatton Station	- Hampton Magna
- Cubbington	- Henley	- Hatton Park
- Hampton Magna	- Kingswood	- Hatton Station
- Hatton Park	- Wilmcote	- Henley

- Hatton Station	- Wood End	- Kineton
- Henley	- Wootton Wawen	- Kingswood
- Long Itchington		- Long Itchington
- Radford Semele		- Radford Semele
- Salford Priors		- Salford Priors
- Studley		- Studley
- Wellesbourne		- Wellesbourne
- Wood End		- Wilmcote
- Wootton Wawen		- Wood End
		- Wootton Wawen

5.9 SA Objective 7: Natural Resources

5.9.1 SA Objective 7 looks at potential impacts upon natural resources at each potential location. These include impacts upon agricultural land and mineral safeguarded areas.

5.9.2 All the small settlement locations include some area of land classified as ALC Grade 3 or higher⁹². The loss of more than 20ha of Best and Most Versatile (BMV) land would be assessed as a major adverse impact on natural resources. This impact cannot be readily mitigated. All small settlement locations would result in the loss of 20ha or more of BML and would therefore have a major adverse effect. The scale of this impact is reflected in the criteria for selection of locations i.e. on greenfield sites.

5.9.3 All small settlement locations, with the exception of South Coventry, coincide with a Mineral Safeguarding Area (MSA).

5.9.4 The strongest performing potential location against SA Objective 7 is South Coventry due to its location outside an MSA, however it is noted that it is located on land graded as ALC Grade 2, with smaller areas on ALC Grade 3 which would result in a major adverse effect.

Best and worst performing options

5.9.5 All small settlements perform similarly against Natural Resources, with the exception of South Coventry, which is the only location that does not coincide with a Mineral Safeguarding Area. South Coventry is therefore the best performing small settlement, with no clear worst performing small settlement.

⁹² Measuring on a scale one to five, if a piece of land is graded as ALC Grade 1 it has the optimal quality of agricultural land, with ALC Grade 5 being the poorest quality of agricultural land.

5.10 SA Objective 8: Waste

- 5.10.1 SA Objective 8 focuses on the potential for each location to increase household waste generation as a result of development. Similarly to climate change, at this stage in the plan making process the number of dwellings to be provided at each potential location is unknown. However, for the purpose of this assessment it is assumed that a maximum of 500 new dwellings could be provided at each location. As such it is likely that all locations could potentially increase household waste generation by more than 0.1% in comparison to current levels across the plan area. This would result in a minor adverse effect for all small settlement locations. This impact could be mitigated through promotion of recycling and reuse schemes and the appropriate provision of recycling storage facilities to meet the scale of growth set out in the SWLP.
- 5.10.2 To determine the best performing potential location, consideration has been given to existing waste infrastructure which may be able to accommodate future growth. Locations such as South Coventry, Radford Semele, Cubbington, Hampton Magna, Bishop's Tachbrook, Studley and Hatton Park are located in close proximity to larger settlements such as Coventry, Redditch and Leamington Spa, are likely to be able to deal with waste more effectively through existing provisions and upgrades.

Best and worst performing options

- 5.10.3 All small settlements perform similarly against waste, with no clear best or worst performing locations.

5.11 SA Objective 9: Housing

- 5.11.1 The measure for SA Objective 9 is the ability of each potential location to impact upon current housing provision and to also deliver a net gain in housing. This element of the assessment reflects the UK's current housing crisis, delivery of more houses would therefore result in a more positive impact.
- 5.11.2 The total number of houses to be built at each potential location is currently unknown but for the purposes of this assessment taken to be approximately 50-500 houses per location. On this basis it can be concluded that all locations have the potential to have a significant positive impact upon housing delivery.

Best and worst performing options

- 5.11.3 All small settlements perform similarly against housing, with no clear best or worst performing location.

5.12 SA Objective 10: Health

- 5.12.1 SA Objective 10 focuses on accessibility to important health facilities such as GPs, hospitals and greenspaces for new residents, alongside the proximity of potential sources of pollution which may have an adverse effect upon human health (such as roads which may increase traffic related atmospheric and noise pollution).
- 5.12.2 Barford, Bishop's Tachbrook, Hampton Magna, Hatton Park, and Studley are the only small settlement locations to either partially or mostly meet the sustainable travel access target distance of a hospital with an A&E department.

- 5.12.3 Half of the small settlement locations are within the sustainable target distance of a GP surgery: Bidford, Bishop's Tachbrook, Claverdon, Hampton Magna, Henley, Kineton, Kingswood, Radford Semele, Studley, Wellesbourne and Wood End.
- 5.12.4 Radford Semele, Studley and Wellesbourne are the only small settlement locations within the sustainable target distance for access to leisure facilities.
- 5.12.5 Mitigation to improve access to these key health facilities and services at new development may include the provision of active travel choices and improved links to sustainable transport options.
- 5.12.6 An AQMA is declared for an area where local air quality is unlikely to meet the Government's national air quality objectives for human health. Delivery of new development close to an AQMA, or other sources of air pollution such as roads, may have adverse effects upon the health of new residents. All the locations, with the exception of South Coventry, are located more than 200m away from an AQMA. A number of the small settlement locations are situated within 200m of a main road. Air quality impacts upon human health can be mitigated through strong policy wording in the SWLP around traffic and air quality and the sensitive design and layout of sites to include facilities for alternative sustainable modes of transport, active travel corridors and incorporation of GI to enhance air quality.
- 5.12.7 In addition to reducing reliance on the private car, the promotion of active travel routes can have a knock-on positive impact upon human health and wellbeing. All small settlement locations are situated within target distances of the existing PRoW and cycle networks. Access to greenspace is an important consideration for the health and wellbeing of future residents in terms of connecting people with nature and allowing for outdoor exercise. All small settlement locations, with the exception of Bearley and Hatton Station, lie within the target distance for greenspace. Whilst within the target distance for greenspace, Bidford, Henley, Studley and Wood End are coincident with existing greenspace and therefore score negatively as this would result in the loss of the existing greenspace.

Best and worst performing options

- 5.12.8 There is considerable variation in the performance of the small settlements against the health objective. The best performing small settlement is Studley, with positive impacts expected for sustainable access to NHS hospitals with A&E departments, GP surgeries, leisure facilities, greenspace and PRoW and cycle networks. The worst performing small settlement is Hatton Station, with a positive impact expected for access to the PRoW and cycle network only.

5.13 SA Objective 11: Accessibility

- 5.13.1 SA Objective 11 looks at accessibility to sustainable and active travel options for new residents and proximity and connectivity to existing settlements and services. The assessment has drawn on the South Warwickshire Settlement Analysis⁹³, which assesses presence of active travel and existing road network links, and any 'barriers' to movement, in relation to each location.

⁹³ South Warwickshire Councils (2022) 'South Warwickshire Settlement Analysis'

- 5.13.2 All small settlement locations perform very well in terms of access to a bus stop with a mixture of major and minor positive benefits having been identified. Twelve SSLs are likely to have a major positive effect on travel by train since the majority of the SSL is coincident with the 2km sustainability zone for train stations. However, nine locations lie outside of the train station zone and consequently are likely to perform less effectively overall in terms of sustainability.
- 5.13.3 The Councils' Settlement Analysis shows a mixed performance of small settlement locations, with Wootton Wawen having excellent connectivity and South Coventry and Studley having good connectivity.
- 5.13.4 The following small settlement locations were shown to have poor connectivity:
- Barford
 - Bearley
 - Claverdon
 - Hatton Park
 - Hatton Station
 - Henley
 - Long Itchington
 - Radford Semele
 - Wellesbourne
 - Wilmcote
- 5.13.5 Mitigation to improve connectivity could be provided at those small settlement locations outside target distances for sustainable transport options and those shown through the Council's study to be poorly connected to services and facilities. This may include the provision of improved active and public transport links to key services and facilities. Depending on the scale of development, there may be the potential to incorporate some smaller scale facilities within site design.

Best and worst performing options

- 5.13.6 There is variation in the performance of the small settlements in relation to accessibility. The best performing small settlement is Wootton Wawen, with positive impacts expected on access to a railway station, bus stops with regular services and food stores, as well as good connectivity to the existing settlement. The worst performing small settlement is Barford, with good access to a bus stop with regular services only and poor access to all other indicators within SA Objective 11.

5.14 SA Objective 12: Education

- 5.14.1 SA Objective 12 looks at accessibility to primary, secondary and further education provision for new residents. It must be stated that although distances to relevant educational provisions have been established, the scoring does not factor in current or future capacities of these educational provisions. This may result in a SSL being within the target distance to an educational provision, but this educational provision having an inadequate capacity to provide for the SSL in question.

- 5.14.2 Seventeen of all small settlement locations are located within the sustainable target distance for a primary school and 13 within the target distance for tertiary education (see **Box 5.5**). Development at these small settlement locations has therefore been assessed as having a minor positive impact due to the accessibility of educational facilities. All locations, with the exception of Henley, Kineton, Radford Semele Studley and Wood End, are situated outside the target distance of a secondary school and therefore a minor adverse effect in terms of accessibility is expected. Kineton and Radford Semele are the best performing options in terms of accessibility to educational facilities, both being within sustainable target distances of all three levels of educational provision.
- 5.14.3 Where access is limited, mitigation could be provided to improve active and public transport links to educational options.

Best and worst performing options

- 5.14.4 There is variation in the performance of the small settlements in relation to access to education. The two best performing locations are Kineton and Radford Semele, with both small settlements having good sustainable access to primary, secondary and tertiary education. The two worst performing locations are Earlswood and South Coventry, with both having poor access to all types of education provision.

Box 5.5: Small settlement locations within target distances of primary, secondary and further education

Small settlement locations within the target distance to primary schools:	Small settlement locations within the target distance to secondary schools:	Small settlement locations within the target distance to further education:
<ul style="list-style-type: none"> • Barford • Bidford • Bishops Tachbrook • Claverdon • Cubbington • Hampton Magna • Henley • Kineton • Kingswood • Long Itchington • Radford Semele • Salford Priors • Studley • Wellesbourne • Wilmcote • Wood End • Wootton Wawen 	<ul style="list-style-type: none"> • Henley • Kineton • Radford Semele • Studley • Wood End 	<ul style="list-style-type: none"> • Barford • Bearley • Bishops Tachbrook • Claverdon • Cubbington • Hampton Magna • Hatton Park • Hatton Station • Kineton • Kingswood • Long Itchington • Radford Semele • Wilmcote

5.15 SA Objective 13: Economy

- 5.15.1 SA Objective 13 looks at opportunities for new residents to access local employment opportunities by sustainable or active modes of transport or being situated within proximity to existing employment.

- 5.15.2 Collectively, the small settlement locations performed well against SA Objective 13 with all locations situated within the target distance of several employment opportunities. In addition, due to the location of all sites upon undeveloped greenfield land there will be no loss of current employment space. Whilst all small settlement locations have the potential to provide employment opportunities for future residents, the exact mix of future development at each location is unknown at this point in the assessment.

Best and worst performing options

- 5.15.3 When taking into consideration the range of existing employment opportunities within 5km of each location, it is likely that those in close proximity to existing urban areas would perform more favourably. These include Cubbington, Radford Semele, Hampton Magna, Hatton Park, Bishops Tachbrook which are close to Leamington Spa, South Coventry which is close to Coventry and Studley which is close to Redditch.

5.16 Summary of SA findings for Small Settlement Locations

- 5.16.1 The following table summarises the sustainability performance of each Small Settlement Location under each SA Objective. It is important to note that each Objective is composed of a number of indicators, as set out in the SA Framework in **Appendix A**. The assessment of each indicator cannot be 'added' to create an overall score as this would be give a misleading indication of the level of impacts and the potential for mitigation. The summary table illustrates the worst performing indicator under each Objective. **Appendix C** of the Main Report provides detailed assessments of each indicator under each SA Objective.

Table 5.1: Summary findings for the Small Settlement Locations

Small Settlement	SA Objective												
	SA1: Climate Change	SA2: Flood Risk	SA3: Biodiversity	SA4: Landscape	SA5: Cultural Heritage	SA6: Environmental Pollution	SA7: Natural Resources	SA8: Waste	SA9: Housing	SA10: Health	SA11: Accessibility	SA12: Education	SA13: Economy
Barford	-	0	-	--	-	-	--	-	++	-	-	-	+
Bearley	-	+	--	--	-	-	--	-	++	-	-	-	+
Bidford	-	0	-	-	-	-	--	-	++	-	-	-	+
Bishop's Tachbrook	-	0	-	--	-	-	--	-	++	-	-	-	+
Claverdon	-	+	-	--	-	-	--	-	++	-	-	-	+
Cubbington	-	0	-	--	-	0	--	-	++	-	-	-	+
Earlswood	-	+	-	--	-	0	--	-	++	-	-	-	+
Hampton Magna	-	+	-	--	-	-	--	-	++	-	++	-	+
Hatton Park	-	0	-	--	-	-	--	-	++	-	-	-	+
Hatton Station	-	0	-	--	-	-	--	-	++	-	-	-	+
Henley	-	0	-	--	-	-	--	-	++	-	-	-	+
Kineton	-	0	-	--	--	-	--	-	++	-	++	+	+
Kingswood	-	0	-	--	-	-	--	-	++	-	++	-	+
Long Itchington	-	0	-	--	-	-	--	-	++	-	-	-	+
Radford Semele	-	0	-	--	-	-	--	-	++	-	-	+	+
Salford Priors	-	0	-	--	-	-	--	-	++	-	-	-	+
South Coventry	-	+	-	--	-	-	--	-	++	-	-	-	+
Studley	-	0	-	--	-	-	--	-	++	-	-	-	+
Wellesbourne	-	0	-	--	-	-	--	-	++	-	-	-	+
Wilmcote	-	0	--	--	-	-	--	-	++	-	-	-	+
Wood End	-	0	--	--	-	-	--	-	++	-	++	-	+
Wootton Wawen	-	0	-	--	-	-	--	-	++	-	++	-	+

6 Evaluation of the New Settlement Locations

6.1 The 7 New Settlement Locations

6.1.1 Reasonable alternative New Settlement locations have been identified as follows:

- A1
- B1
- C1
- E1
- F1
- F2
- F3

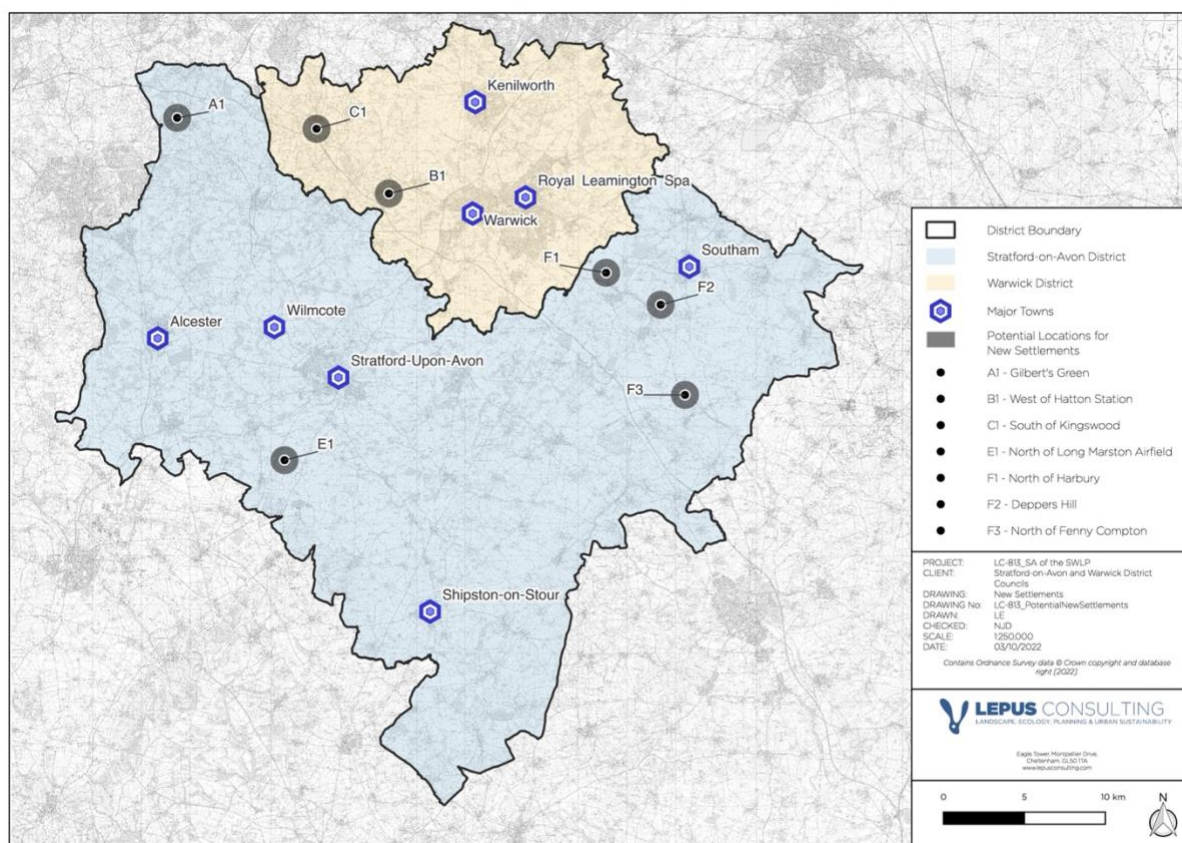


Figure 6.1: Stratford-on-Avon District Council and Warwick District Council administrative boundaries and the New Settlement Locations

6.2 Technical data

6.2.1 **Appendix D** provides an appraisal of 7 New Settlements where, at present, an assumption of 40 dwellings per hectare has been applied and that 40% of the New Settlement would comprise greenspace that optimises green infrastructure benefits including delivery of ecosystem services and protects and enhances natural capital.

6.2.2 The New Settlements have been assessed for likely impacts on each of the 13 SA Objectives, as outlined in the SA Framework (see **Appendix A**). Likely sustainability impacts have been set out in the tables within each SA Objective, in accordance with the methodology set out in **Chapter 2**.

6.3 SA Objective 1: Climate Change

6.3.1 The proposed large scale residential-led development across the Plan area is likely to result in an increase in GHG emissions. Development could deliver approximately 6,000 or more dwellings. An assumption of 2.38 people per dwelling⁹⁴ across 6,000 additional homes would potentially increase the population of the Plan area by 14,280. With the average emissions in 2020 at approximately 6.65 tCO₂ per capita, GHG levels may subsequently increase by 94,962 tCO₂ following development.

6.3.2 **All New Settlements would be expected to perform in the same manner against SA Objective 1**, with 6,000 new dwellings proposed. It is not possible to select a best performing site against this objective as all New Settlements would lead to an increase in GHG emissions.

6.4 SA Objective 2: Flood Risk

6.4.1 **New Settlements A1, B1, C1 and F1 perform strongest against SA Objective 2**, with less than 1% of the settlement area coinciding with Flood Zones 2 and/or 3 and less than 10% coinciding with areas of high surface water flood risk. New Settlements E1 and F3 perform moderately against Flood Zones 2 and/or 3 but would be likely to induce a minor adverse impact for surface water flood risk. Settlement F2 is the weakest performing site in relation to flood risk as more than 10% of the New Settlement area coincides with Flood Zones 2 and/or 3. Although F2 is less than 10% coincident with areas of high surface water flood risk, areas within Flood Zones 2 and/or 3 are more difficult to mitigate.

6.5 SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

6.5.1 None of the New Settlements are expected to present any adverse impacts on Habitat Sites, National Nature Reserves or Local Geological Sites.

6.5.2 Settlements A1 and F1 are expected to present a minor adverse impact on SSSIs, being situated within Impact Risk Zones for Windmill Naps Wood and Ufton Fields respectively. These IRZs state “any residential development of 50 or more houses outside existing settlements/urban areas” will require consultation with Natural England.

6.5.3 A1 and B1 are likely to induce a minor negative impact on unnamed Ancient Woodlands. F1 is located approximately 210m Ufton Fields Local Nature Reserve which would also present a minor negative impact on this LNR.

⁹⁴ Office for National Statistics (2022) Census 2021. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesenglandandwales/census2021#number-of-households> [Date accessed: 14/10/22].

6.5.4 All New Settlements present a major negative impact on various Local Wildlife Sites, with the exception of Settlement B1 which is expected to induce a minor negative impact on multiple LWS's including 'Wood at Hatton Farm', 'Grand Union Canal' and 'Railway Embankment'. All New Settlements are also expected to negatively impact priority habitats, primarily deciduous woodland and traditional orchards.

6.5.5 **The New Settlement B1 performs best against SA Objective 3**, being the only Settlement not expected to deliver major adverse impacts to LWS. Though negative impacts may be expected at B1 for an Ancient Woodland and priority habitats, these impacts would be mitigatable by suitably imparting the proposed 40% GI provision within the Settlement layout. Additional biodiversity net gain may also be achieved by following the recommendations of the NPPF.

6.6 SA Objective 4: Landscape

6.6.1 New Settlement E1 is the only location expected to present an adverse impact on the Cotswolds AONB. All New Settlements are likely to induce adverse impacts on landscape character and views from the PRoW networks.

6.6.2 Settlement F2 is expected to majorly adversely impact landscape sensitivity, with a minor negative impact on landscape sensitivity also expected at Settlements A1, E1 and F3. Settlements B1, C1 and F1 are unlikely to impact sensitive landscapes within the Plan area.

6.6.3 A1 and B1 are likely to adversely impact the Arden Special Landscape Area, with F3 expected to adversely impact the Ironstone Hill Special Landscape Area. All other New Settlements are not expected to impact Special Landscape Areas within the Plan area.

6.6.4 Only F3 is within proximity to a Country Park, located approximately 1.5km from Burton Dasset. All other New Settlements are not located near to Country Parks.

6.6.5 New Settlement A1 is likely to increase the risk of coalescence between Aspley Heath, Woodend and Tamworth-in-Arden. A major negative impact would be expected on the risk of coalescence as a result of development at this New Settlement. All other Settlements would be likely to reduce separation between two or more existing settlements, inducing minor adverse impacts with the exception of E1 which poses no risk of coalescence.

6.6.6 **The best performing New Settlements against SA Objective 4 are C1 and F1**, with mitigations required for landscape character, views from PRoW and coalescence and negligible effects expected for all other receptors within this SA Objective.

6.7 SA Objective 5: Cultural Heritage

6.7.1 None of the New Settlements coincide with or affect Grade I Listed Buildings, with only B1 likely to adversely impact a Grade II* Listed Building as it is located approximately 170m from the Church of Holy Trinity and separated by undeveloped land, farmland and greenfield. Settlements A1, B1, C1, F1 and F2 coincide with Grade II Listed Buildings which presents a major adverse impact to those Listed Buildings involved. Settlements E1 and F3 do not impact any Grade II Listed Buildings.

6.7.2 Only Settlement C1 is expected to adversely impact a Registered Park and Garden, located approximately 500m from Baddesley Clinton Hall. Settlements A1, F1, F2 and F3 are situated within close proximity to Conservation Areas. Settlement A1 is expected to adversely impact the setting of Tanwor, F1 and F2 are expected to adversely impact the setting of Harbur and F3 is expected to impact the setting of Fenny. Only Settlement C1 is likely to induce a negative impact on the setting of a Scheduled Monument, being located close to Baddesley Clinton Hall moated site and fishponds.

6.7.3 **The best performing Settlement is E1**, which is not expected to adversely impact any of the receptors identified within SA Objective 5. Settlement F3 also performs strongly, despite adversely impacting a conservation area. This adverse impact is likely to be mitigatable through the layout and design of the Settlement.

6.8 SA Objective 6: Pollution

6.8.1 All New Settlements are located sufficiently far from the six AQMAs and all groundwater source protection zones within the Plan area. Settlements A1, B1, C1 are located within 200m of a main road, which is likely to expose site end users to pollutants associated with vehicular emissions.

6.8.2 All Settlements, with exception of E1, are located within 200m of a railway which is expected to present adverse impacts by exposing site end users to transport-associated air and noise pollution. Settlements A1, B1, C1, E1 and F2 are located within 200m of a watercourse which is expected to induce adverse impacts on water quality in the watercourses concerned.

6.8.3 **The best performing Settlement is likely to be F1** despite being within close proximity to a railway. Settlement E1 performs similarly to F1 but is close to a watercourse, which is likely to be more difficult to mitigate than proximity to railway as adverse impacts on watercourse quality can be unpredictable and affect water bodies downstream.

6.9 SA Objective 7: Natural Resources

6.9.1 Development at all New Settlements is expected to result in a permanent and irreversible loss of BMV soils within the Plan area. All sites are situated on ALC Grade 3 land, with E1 also partially located on ALC Grade 2 land. Coincidence with ALC Grade 3 and above land is expected to present major adverse impacts on these soils.

6.9.2 All New Settlements, with the exception of E1 and F3, coincide with Mineral Safeguarding Areas. This results in **Settlements E1 and F3 performing best** against SA Objective 7.

6.10 SA Objective 8: Waste

6.10.1 Residential-led development is likely to result in an increase in household waste generation. The potential for the development of over 6,000 dwellings at each New Settlement could potentially increase household waste generation by more than 1% in comparison to current levels within the Plan area, and therefore a major adverse impact on waste would be expected. Consequently, there is **no best performing Settlement** in relation to SA Objective 8 as all Settlements perform in the same manner in terms of waste generation.

6.11 SA Objective 9: Housing

- 6.11.1 Each New Settlement has the potential for over 6,000 dwellings, resulting in a net gain for the provision of housing within the Plan area and significantly contributing towards meeting housing needs if developed. Subsequently, there is **no best performing Settlement** against SA Objective 9 as all Settlements perform in the same manner in terms of housing provision.

6.12 SA Objective 10: Human Health

- 6.12.1 Only B1 is situated within the target distance to an NHS hospital with an A&E department, with all other New Settlements expected to adversely impact access to these healthcare services due to their proximity to the nearest NHS hospital.
- 6.12.2 New Settlements A1, F1 and F3 are likely to positively impact site end users as these Settlements are located within the target distance to GP surgeries. Adverse impacts on site end users' access to GP surgeries are expected at B1, C1, E1 and F2 due to being located outside of the target distance.
- 6.12.3 All New Settlements are outside of the target distance to leisure facilities, presenting adverse impacts on access to leisure facilities for site end users. None of the New Settlements are located within close proximity to AQMAs, with A1, B1 and C1 located within 200m of a main road. These three Settlements would be expected to present adverse impacts on human health as a result of the exposure of site end users to pollutants associated with vehicular emissions.
- 6.12.4 Access to PRoWs and/or cycle networks is present across all New Settlements, with access to greenspace also present in each New Settlement. The majority of the Settlement area of A1, C1 and F2 have access to greenspace.
- 6.12.5 **New Settlement A1 performs best against SA Objective 10**, with access to a GP surgery and strong access to greenspace within the Settlement area. F1 and F3 also perform strongly, with both Settlements having access to GP surgeries.

6.13 SA Objective 11: Accessibility

- 6.13.1 F2 is the only New Settlement within the target distance to a bus stop with regular services. Settlements A1, B1 and C1 are within a sustainable distance to a railway station, with A1 approximately 80m from Wood End Station, B1 coinciding with Hatton Station and C1 approximately 390m from Lapworth Station. Settlements E1, F1, F2 and F3 are outside of the desired distance to a railway station and will consequently present adverse impacts to site end users who require access to railways.
- 6.13.2 Settlement A1 is the only site with Grade B connectivity, with all other sites situated in areas with Grade C connectivity. Settlements C1, F1 and F3 are the only Settlements located within the target distance to food stores, resulting in minor positive impacts to site end users' access to these local services.
- 6.13.3 **The best performing Settlement is C1**, with good access to a railway station and food stores, with moderate levels of connectivity. New Settlement A1 also performs strongly, with good connectivity and railway station accessibility.

6.14 SA Objective 12: Education

- 6.14.1 Each New Settlement except for E1 has suitable access to one or more primary schools and subsequently would be expected to present minor positive impacts on site end users' access to educational facilities. All New Settlements are situated outside of the desired distance to secondary education, with A1 and F3 also outside of the target distance to tertiary educational facilities. Settlements located outside of these relevant target distances are expected to adversely impact access to educational facilities.
- 6.14.2 **Settlements B1, C1, F1 and F2 perform equally well against SA Objective 12**, with access to primary and tertiary educational facilities. Settlement E1 performs worst, only within the target distance to tertiary education.

6.15 SA Objective 13: Economy

- 6.15.1 All New Settlements currently comprise undeveloped land and are not likely to result in a loss of current employment space. As well as the provision of over 6,000 homes, the New Settlements could provide employment opportunities such as the development of a local centre which could include shops and services, resulting in employment opportunities for current and future local residents.
- 6.15.2 **Each New Settlement performs the same against SA Objective 13** in relation to employment floorspace provision and access to employment opportunities.

6.16 Summary of findings for the potential New Settlement Locations

- 6.16.1 **Table 6.1** summarises the assessment findings for the New Settlements for each SA Objective. It is important to note that each Objective is composed of a number of indicators, as set out in the SA Framework in **Appendix A**. The assessment of each indicator cannot be 'added' to create an overall score as this would be give a misleading indication of the level of impacts and the potential for mitigation. The summary table illustrates the worst performing indicator under each Objective. **Appendix D** of provides detailed assessments of each indicator under each SA Objective.

Table 6.1: Summary SA assessments for the New Settlement Locations

New Settlements	SA Objective												
	SA1: Climate Change	SA2: Flood Risk	SA3: Biodiversity	SA4: Landscape	SA5: Cultural Heritage	SA6: Environmental Pollution	SA7: Natural Resources	SA8: Waste	SA9: Housing	SA10: Health	SA11: Accessibility	SA12: Education	SA13: Economy
A1	-	+	-	-	-	-	-	-	++	-	-	-	+
B1	-	+	-	-	-	-	-	-	++	-	-	-	+
C1	-	+	-	-	-	-	-	-	++	-	-	-	+
E1	-	-	-	-	0	-	-	-	++	-	-	-	+
F1	-	+	-	-	-	-	-	-	++	-	-	-	+
F2	-	-	-	-	-	-	-	-	++	-	-	-	+
F3	-	-	-	-	-	-	-	-	++	-	-	-	+

7 Evaluation of the Spatial Growth Options

7.1 Presentation by SA Objective

7.1.1 The following sections discuss how the different Growth Options perform in terms of each SA Objective. The Councils have identified five Spatial Growth Options as follows:

- Rail Corridors
- Sustainable Travel
- Economy
- Sustainable Travel and Economy
- Dispersed

7.1.2 It should be noted that there is considerable overlap between some of the options. For example, Option 2 (Sustainable Travel) is a hybrid of rail corridor options and bus options presented in the 2021 Issues and Options scoping exercise⁹⁵, making it similar in some respects to Option 1 (Rail Corridors).

7.1.3 Option 4 (Sustainable Travel and Economy) is a hybrid of Spatial Growth Options 2 and 3.

7.1.4 Each option includes a list or framework of settlements that might be best placed to deliver the Spatial Growth Option. The settlement locations shown in the options are indicative and should not be taken as firm proposals. In some cases, the individual sustainability performance of some settlements is available in Chapters 4-6 and Appendices B-D of this report. An explicit exercise in evaluating the specific sustainability appraisal of the settlement frameworks has not been undertaken since some settlements have not been evaluated as part of the wider identification of reasonable alternatives at Broad Locations and Small Settlement Locations. Nevertheless, the following evaluation of the five Spatial Growth Options includes an appreciation of the settlement framework as part of the spatial conceptualisation behind the formulation of the Growth Options.

7.1.5 Unlike the Broad Locations, Small Settlement Locations and the New Settlement Locations, the geographic details are less defined; there are no specific boundaries. However, the spatial portraits of each Growth Option are useful in being able to evaluate impacts in terms of size, nature and location. Assessment of the Growth Options can usefully be informed by the application of certain sustainable development principles, some of which are discussed in the evaluation below.

7.1.6 Each Spatial Growth Option is evaluated by SA Objective and each is then ranked since the SA scores have limited granularity (see **Table 2.1** in the methodology). The rank is a high level indication about which option would be likely to perform best when compared to another. Whilst some options may have the same overall SA score, it is possible to specify that one would likely perform better than the other.

7.1.7 A summary of the scores has been presented in **Table 7.1**.

⁹⁵ Scoping and Call for Sites Consultation. Available at: <https://www.southwarwickshire.org.uk/swlp/scoping-and-call-for-sites-consultation.cfm> [Date accessed: 22/11/22]

Table 7.1: Summary SA findings for the Spatial Growth Options

Spatial Option	SA Objective												
	SA1: Climate Change	SA2: Flood Risk	SA3: Biodiversity	SA4: Landscape	SA5: Cultural Heritage	SA6: Environmental Pollution	SA7: Natural Resources	SA8: Waste	SA9: Housing	SA10: Health	SA11: Accessibility	SA12: Education	SA13: Economy
Rail Corridors	-	0	+/-	-	+/-	+	+	-	++	+/-	++	+/-	+
Sustainable Travel	-	0	-	+	+/-	+	+	-	++	+/-	+	+/-	+
Economy	-	0	-	-	+/-	+/-	-	-	++	+/-	-	+/-	++
Sustainable Travel & Economy	-	0	-	-	+/-	+/-	-	-	++	+/-	+	+/-	++
Dispersed	--	0	--	+	+	+/-	0	-	++	--	--	-	-

7.2 SA Objective 1: Climate Change

- 7.2.1 The challenges of climate change lie at the heart of the SWLP and all Growth Options have been designed to mitigate against the effects of increased GHG consumption whilst also preparing to continue adapting to the legacy of climate change effects which will affect daily life during the plan period and beyond. Effects such as increased storm and flood frequency, hot summers with associated drought, biodiversity, food production and health implications will affect the quality of life for everybody living in the Plan area. The planning process can play its part in providing solutions that reduce consumption and prepare for the future.
- 7.2.2 All options direct development to the open countryside, so it is likely that the majority of development would be located on previously undeveloped land. It would also be expected to result in an increase in carbon emissions due to the construction and occupation of development, including through an increase in the number of vehicles on the road which is a major source of greenhouse gases (GHGs). Development proposals would be likely to result in a net loss of vegetation cover and permeable soils, which help to attenuate flood risk, and therefore, would be expected to result in the exacerbation of flood risk across many of these locations. This could potentially result in detrimental impacts in regard to human health and safety. Loss of soil reduces the ability to sequester carbon in organic matter such as grass and soil.
- 7.2.3 Understanding and quantifying climate change effects requires good appreciation of a wide range of variables. The Council has commissioned a climate change study to better understand some of the likely impacts and effects on climate change associated with the Growth Options (and New Settlements). Once available, data can be used to evaluate the Growth Options.
- 7.2.4 Whilst it is challenging to evaluate the five options and there will be a mix of positive and negative effects in all options, the balance of effects associated with Option 5 (Dispersal) will be characterised by more adverse effects since motorised private transportation is one of the main contributors to GHG emissions alongside agriculture and energy consumption.

- 7.2.5 On balance, development at this scale will have more negative effects than positive ones on SA Objective 1. There is no outstanding best performing option; spatial options 1 to 4 have been assessed as being likely to perform in a similar way at this stage. Without further detail it is not possible to identify a standout best performing option in relation to this objective. Assuming Option 3 will deliver employment opportunities near to new homes, this option would have more potential to reduce GHG emissions related to travel to work.

7.3 SA Objective 2: Flood Risk

- 7.3.1 Watercourses that pass through the two districts include the River Avon, Arrow, Alne, Dene and Stour. Fluvial flood risk is primarily located around the larger rivers like the Stour and the Avon.
- 7.3.2 No single Option is expected to perform better or worse than the other for flood risk. The principles of flood risk avoidance and management will apply to all development wherever it is needed in the plan area. There should be no allocations that are coincident with Flood Zone 2 or 3 unless they can be incorporated into sound green and blue infrastructure design.
- 7.3.3 Due to the rural nature of the districts, and low levels of brownfield land, all options direct significant quantities of development to previously undeveloped land in the countryside, leading to a loss in vegetation coverage and permeable soils. Surface water flooding can be mitigated through Sustainable Urban Drainage Systems (SUDS).

7.4 SA Objective 3: Biodiversity, Flora, Fauna and Geodiversity

- 7.4.1 Warwickshire's Ecological Network is a special quality that is associated with the Plan area and the County as a whole, a place that is famous for its ancient woodland and distinctive countryside. Large swathes of the plan area are Green Belt which helps protect loss of soil and maintain habitats. The quality of habitats varies across the plan area and the Wildlife Trust's Nature Recovery Network is an important step in the right direction to help protect and enhance biodiversity at a strategic scale. Green Belt does not necessarily equate with high quality habitats and careful evaluation of the Green Belt in terms of intrinsic biodiversity quality is essential to better understand any impacts of locating development there.

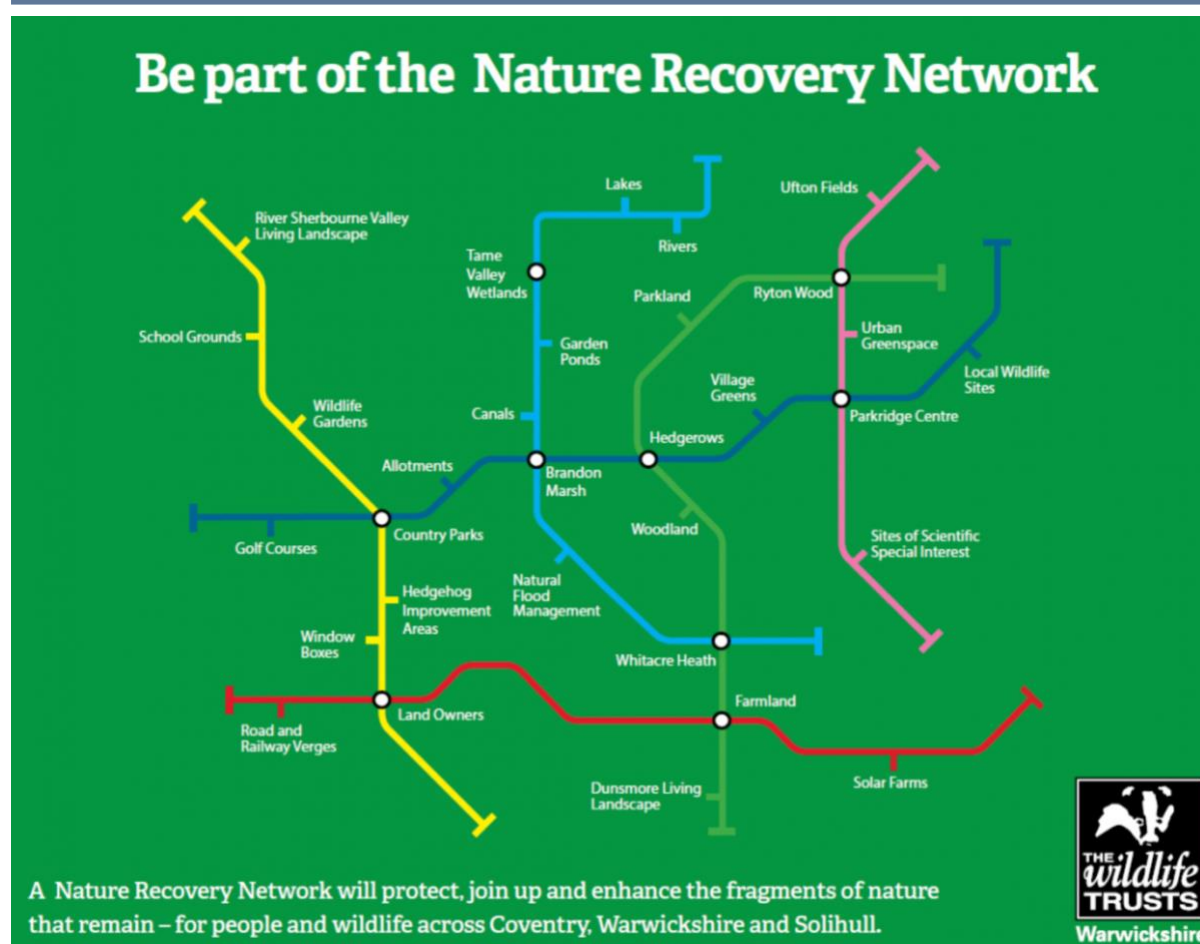


Figure 7.1: Schematic map of Warwickshire's Nature Recovery Network

7.4.2 Direct impacts on biodiversity associated with development include:

- Loss of habitat type
- Habitat fragmentation
- Impact on designated species
- Local extinction
- Loss of species richness
- Reduction in genetic diversity
- Isolation

7.4.3 Some examples of indirect effects include:

- Impact on ecosystem services
- Impact of water quality
- Impact on air quality
- Impact of ecosystem function
- Reduced enjoyment for people.

7.4.4 As with climate change impacts, any attempt to spread development and introduce increased car use will affect biodiversity. Direct loss of habitats should be avoided and the findings from the settlement evaluation in **Appendices B-D** reveal that the most common features likely to be affected are Local Wildlife Sites and Priority Habitats. Without exact details of development footprint, it is challenging to make an evaluation beyond one that looks at principles. In this respect, dispersal is likely to be the worst performing Spatial Option. It will increase disturbance on a wider scale. Habitat loss can be avoided with detailed land use planning and adherence to the Nature Recovery Network is critical in the choice of a preferred Growth Option. Option 1 (Rail Corridors) appears to present the option with highest density of development being focused on railway stations as nodes for development; perhaps this might reduce wider impacts on biodiversity. However, restoration of disused railway lines that have since become valuable wildlife locations will need careful planning to offset and protect biodiversity which will be displaced in the short term.

7.5 SA Objective 4: Landscape

7.5.1 Landscape designations include parts of the Cotswolds AONB, the four Special Landscape Areas identified in the Stratford Core Strategy which include Arden, Cotswold Fringe, Feldon Parkland and Ironstone Hill Fringe. There are a number of Areas of Constraint which also serve as landscape protection and management designations in Stratford-on-Avon district.

7.5.2 The distinctive quality of the landscape in South Warwickshire includes rolling hills and woodland; it includes the nationally important Cotswolds AONB designation. Residents feel passionately about their countryside and it was an important theme of the earlier consultation on the SWLP in 2021. Particular parts of the landscape are sensitive to change, those which have distinctive features and strong integrated character. This is evident in the landscape evaluation work that was prepared to inform the Stratford Core Strategy⁹⁶. It would be useful to undertake landscape evaluation to better inform the SA process, perhaps at the preferred options stage.

7.5.3 All spatial options are likely to be located, in large part, on previously undeveloped land, which introduces a likely risk of urban sprawl into the surrounding countryside. The proposed development in all Growth Options could potentially be discordant with the local landscape character. Some options, eg Option 1 (Rail Corridors) are focused in a smaller number of locations however, the landscape receptors at each location will determine the extent to which a landscape can accommodate change without permanent adverse effects. Some railway station locations are in attractive countryside with small villages; new development at the scales proposed in the growth options could transform these areas into built up locations. In locations that are already built up and which can cope with urban extensions may be less sensitive to effects on the landscape. Option 2 (Sustainable Travel) possibly fits most closely with this scenario.

7.5.4 Overall, a significant adverse effect on the local landscape cannot be ruled out when discussing growth at the scale envisaged by the plan. It would be expected that all options will alter the view experienced by users of the local PRoW network and local residents to some extent. Option 5 (Dispersal) is potentially the best option leading to the least adverse effects since overall scale of development is more thinly spread and distributed.

⁹⁶ White Consultants (2011 and 2012) Landscape sensitivity evaluation of main settlements and local service villages.

7.6 SA Objective 5: Cultural Heritage

- 7.6.1 Warwickshire has a very distinctive cultural heritage as documented in the Warwickshire Historic Landscape Characterisation (2010 by Ben Wallace). The Growth Options all have the ability to adversely impact heritage and likewise, depending on design quality, have the opportunity to ensure historic assets become part of building beautiful places.
- 7.6.2 Loss of the countryside to new development will inevitably affect heritage such as ridge and furrow or the setting of locations like Registered Parks and Gardens or Listed Buildings. Scale and impact of growth may restrict the ability to avoid adverse effects at particular locations for example expansion of Warwick and Kenilworth may both introduce irreversible effects on the Grade 1 Listed Castles however smaller settlements might be able to avoid the physical impacts of massing and urban sprawl which is inevitable associated with concentrating development in a large location such as the polycentric strategic positioning of Warwick, Leamington Spa and Kenilworth. In this respect Option 5 (Dispersal) may perform better than options that concentrate development, especially allocating employment and housing next to each other.
- 7.6.3 Heritage assets are located principally, but not exclusively, within the towns and village. Many heritage assets can be found in areas with high accessibility, including town centres. They often make an important contribution to the sense of place and can play an important role when considering sustainable Spatial Growth Option development proposals. All of the main settlements have strong historic associations such as Roman Alcester and towns of Warwick and Stratford-upon-Avon that both have strong Medieval and Georgian architecture influences.
- 7.6.4 The design and layout of development proposals are a critical consideration for the historic environment. Options 1-4 are likely to seek to intensify under-utilised and vacant space within town centres. Utilising vacant space would introduce new built form. Any proposals for development at these locations will need to carefully consider how new development will best fit with the existing built form or if development is inappropriate due to irreversible impacts on cultural heritage. In considering design aspirations, the principles of the 2020 'Building Better, Building Beautiful' report⁹⁷ should be embraced. There are three pillars to the approach advocated in this report: *"ask for beauty, refuse ugliness and promote stewardship"*. It is not possible to determine specific impacts on cultural heritage at each location until these are properly understood and potential allocations have been identified. If the 'Building Better, Building Beautiful' principles can be followed, impacts on cultural can be avoided and or mitigated. Similarly, there could be opportunities to facilitate positive effects, especially if cultural heritage features are carefully factored into the public realm to emulate a sense of civic pride and raise awareness of the feature in question.

⁹⁷ MHCLG (2020) Living with Beauty: Promoting health, well-being and sustainable growth: The report of the Building Better, Building Beautiful Commission. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/861832/Living_with_beauty_BBBBC_report.pdf [Date accessed: 20/10/22]

7.7 SA Objective 6: Environmental Pollution

- 7.7.1 Environmental Pollution probably manifests itself cumulatively rather than at the project scale and in this respect all Growth Options will have a bearing on diffuse pollution associated with development. Impacts to water courses should be avoided from construction using environmental management plans. However, pollution impacts to rivers will come from sewage overflows which are associated with a combination of new development and storm events exacerbated by climate change that can exert challenging pressure on existing infrastructure.
- 7.7.2 Air quality is likely to improve from any option that promotes sustainable transport such as Options 1 and 2. Reducing the need to travel by locating employment close to residential areas may also help in this respect.

7.8 SA Objective 7: Natural Resources

- 7.8.1 All growth options will lead to loss of BMV land. Development proposed in these locations would be expected to result in the loss of this agriculturally important soil resource.
- 7.8.2 Under All Options, development would be directed towards the open countryside. The scale and extent of each option varies with Option 5 possibly having the greatest versatility in terms of being able to avoid areas of BMV since the distribution spreads development to a wide range of locations. This is no guarantee that BMV will be protected through the Growth Options selection as detail is necessary to better understand the precise implications of development on BMV land.
- 7.8.3 Development proposals directed to previously undeveloped locations would be expected to result in a permanent and irreversible net loss of ecologically and agriculturally valuable soils caused by excavation, compaction, erosion, contamination, and removal of vegetation cover.
- 7.8.4 Options 1 and 2 potentially promote high density development. A key benefit of higher development densities is that less land would be required to be built on to satisfy the local development needs. This would help to limit the permanent and irreversible losses of agriculturally and ecologically valuable soils caused by development delivered through the SWLP. Therefore, these two options would be likely to have a minor positive impact on natural resources.

7.9 SA Objective 8: Waste

- 7.9.1 All options will result in waste generation. At the time of writing, there is not sufficient information available to accurately predict the effect that each spatial option would have in terms of minimising waste generation, promoting the sustainable management of waste, or encouraging recycling and re-use of waste. It is likely that all options would increase waste generation and place pressure on existing waste management systems, to some extent. However, evidence suggests that developmental growth within the Plan area would not significantly increase waste generation, as the quantity of waste produced by each household and business is generally reducing. All Options perform similarly as they purport to deliver the same quantity of housing. The dispersal option will have more adverse effects on climate change as more mileage will be covered by waste management vehicles.

7.10 SA Objective 9: Housing

- 7.10.1 All options will increase the volume of housing. The new HEDNA is due for release soon and this will be used in the SA process to inform evaluation of this SA objective. Ensuring a variety of homes are built, including affordable homes, is essential to help combat homelessness.

7.11 SA Objective 10: Health

- 7.11.1 As a primarily rural plan area, access to the countryside will provide site end users with good opportunities to pursue a healthy lifestyle. Both of these factors would be expected to have physical and mental health benefits for local residents. Whilst access to a GP surgery is a possibility for some of the settlements access to A&E departments is not. In this respect Options that can facilitate new infrastructure as part of geographic concentration and delivery through a critical mass will perform better. Under all Growth Options, development would be directed to countryside locations which are generally located towards the urban edge. New residents situated in these areas would be likely to have more limited access to health care facilities and development would result in the loss of some previously undeveloped land and associated natural habitats.
- 7.11.2 Impacts on health from roads and railways need to be carefully considered. For example, the AQMAs are principally in larger urban areas which reflects the poor levels of air quality in these locations.
- 7.11.3 Development at lower densities can have benefits to human health, by providing footpaths and cycleways for active travel, space for residential gardens, open spaces for outdoor exercise and adequate indoor residential space. Only Option 1 infers slightly higher density development associated with expansion at railway stations in the Options and this is caveated in the Option 1 supporting text.
- 7.11.4 Option 5 (Dispersal) is the worst performing Growth Option. Options 1, 2, 3 and 4 are all associated with development in Warwick and or within reach Alexandra Hospital at Redditch where development will be supported by access to A&E services within the sustainable distance of 5km. However there are large parts of the area that lie outside of the sustainable distance for access to A&E.

7.12 SA Objective 11: Accessibility

- 7.12.1 Most of the existing railway stations in South Warwickshire lie within or close to the West Midlands Green Belt, and consequently this growth option would require the release of a significant amount of Green Belt land. South Warwickshire's railway stations are not evenly spread over the area, and many are in very small settlements. In many parts of South Warwickshire, bus travel is the only viable public transport option.
- 7.12.2 Option B (Sustainable Travel) would promote development along main roads with bus routes. Building on main bus corridors is, of course, based on the road network. This could be seen as a less sustainable option if new residents and employees do not choose to use the bus service. However, by positioning new development on main bus corridors, people are provided with the choice. This approach should also consider any future proofing for electric cars and or consider the option (see policy options for 20 minute neighbourhoods in **Appendix E**) which embraces 20 minute neighbourhood principles rather than just road with bus routes.

- 7.12.3 It should be noted that at this stage in the plan-making process, no detailed feasibility work has been undertaken around the capacity of existing rail infrastructure or the potential for enhanced or new services. There may be locations identified in these growth options where rail improvements are found not to be feasible, or where the existing capacity could support only limited growth. Further work will be undertaken as the growth options are further refined.
- 7.12.4 The Options do not mention opportunities to “*promote healthy lifestyles*” which could potentially include encouraging active travel such as walking and cycling. Green infrastructure provision is an important consideration in this respect. It is noted however that the policy options (see **Appendix E**) address these matters in more detail.
- 7.12.5 Options 1, 2 and 4 will deliver the best results overall for accessibility. Option 5 is the worst performing due to inevitable reliance on car-based transport and lack of sustainable transport modes. Option 3 to some extent may also see greater reliance on car transport modes associated with economic development that maybe needs more flexibility than that offered by buses and/or exploits locations that are close to motorways.
- 7.13 **SA Objective 12: Education**
- 7.13.1 The extent to which all spatial options would facilitate good education for new residents is almost entirely dependent on the specific location of development, which is uncertain at this stage. Option 5 is likely to be the worst performing since students may have to travel further afield if widely distributed across the Plan area.
- 7.14 **SA Objective 13: Economy**
- 7.14.1 There are a range of different employment sectors in the Plan area, with professional services, health services, transport services, retail and wholesale trades, motor industry as well as the self-employed.
- 7.14.2 Options 3 and 4 will deliver the best results overall for economy since they explicitly focus on the supply of employment land either alongside existing and new development proposals or on the rail lines. Option 5 is the worst performing due to its widespread nature. This misses the opportunities and economies of scale that enhance and expand local economic multipliers that are more likely to occur with critical mass in locations that have a range of infrastructure as well as supporting workforce who can easily access their place of work. Working from home approaches which became necessary during the Covid Pandemic are already reverting to work patterns that include attending the workplace more regularly once more.
- 7.15 **Conclusion**
- 7.15.1 High level assessment of Spatial Growth Options that are not all distinct from each other, with the exception of Option 5, means that sustainability performance can only be evaluated with several caveats. These include the fact that detailed locational information is not available and the ability to identify effects with precision is challenging. The scores in **Table 7.1** are strictly a guide and do not represent a diagnostic analysis. Mitigation has not been factored into the performance of the Growth Options since it is best worked up once more detailed locational information is available.

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- 7.15.2 Different options are likely to perform better for certain SA Objectives than others. With this in mind, an overall best performing option is hard to identify. Option 5 is the worst performing option whilst Option 2 is likely to align most closely with development that will ultimately seek the most effective mitigation against climate change. These options will also deliver better performance in respect of pollution and natural resource impacts since they are both slightly more concentrated than Options 3 and 4. However, whilst they perform positively for employment and economy, Options 3 and 4 are best in this respect. Without further detail, all options perform the same for waste and housing.

8 Evaluation of the Policy Options

8.1 Assessing the policy options

- 8.1.1 The South Warwickshire Councils have identified a range of policy options for consideration, as part of the Issues and Options Consultation for the emerging Local Plan. The policy options include those for delivering the area's economic and housing needs as well as covering various development management aspects.
- 8.1.2 Policy options have been identified by the Councils for 63 of the 'Issues' identified within the Issues and Options document. This appendix provides an assessment of 116 policy options, associated with these 63 options.
- 8.1.3 Each option appraised in this report has been assessed for its likely impacts on each SA Objective of the SA Framework (see **Appendix A**) and is in accordance with the methodology as set out in the SA Main Report.
- 8.1.4 The assessments are presented in **Appendix E** and are based on the policy options as presented in the South Warwickshire Local Plan Issues and Options Consultation document, dated November 2022.
- 8.1.5 The assessments have identified the best performing option for each policy where possible, or in some circumstances recommended that a combination of options could potentially result in the most sustainability benefits.

8.2 Summary of findings

- 8.2.1 There are a wide range of policy options that offer different approaches to place making and delivering development needs for South Warwickshire. In general, those policies which include strong positive interventionist approaches tend to have the highest levels of sustainability performance.

9 Housing and Employment number option assessments

9.1 Housing number options

Option I	The HEDNA trend-based projections point to a need for 4,906 dwellings annually across the whole sub-region with 868 dwellings per annum in Stratford-on-Avon and 811 dwellings per annum needed in Warwick. Combined total of 1,679 per annum.
Option II	The Standard Method calculation identifies a need for 5,554 dwellings annually across Coventry and Warwickshire, but with 564 dwellings per annum in Stratford-on-Avon and 675 dwellings per annum needed in Warwick. Combined total of 1,239 per annum.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Options	Climate Change	Flood Risk	Biodiversity & Geodiversity	Landscape	Cultural Heritage	Pollution	Natural Resources	Waste	Housing	Health	Accessibility	Education	Economy
Option I	--	+/-	-	--	+/-	-	--	-	++	+/-	-	+/-	+
Option II	--	+/-	-	--	+/-	-	--	-	++	+/-	-	+/-	+
Best performing	II	II	II	II	II	II	II	II	I	?	?	?	?

- 9.1.1 Addressing the diverse accommodation needs for all residents in South Warwickshire, the housing number options in the SWLP have been identified through the Housing and Economic Development Needs Assessment (HEDNA), based on new-trend projections for population and the Standard Method for the calculation of housing need. The methods of calculating housing need are described in more detail under Issue H1 of the Issues and Options document.
- 9.1.2 While the HEDNA calculation of housing need identifies a lower overall figure for the sub-region, the annual housing need figures for the Stratford-on-Avon and Warwick Districts are higher than using the Standard Method.
- 9.1.3 Pursuing either of the options would result in major positive impact on SA Objective 9 as it is expected that the proposed housing numbers would largely cater to the housing needs of all the residents, including affordable, student, old persons, specialist and self and custom build housing, along with the accommodation needs of gypsy and traveller and travelling showpeople communities. Using the HEDNA figure should more accurately represent local housing needs than the Standard Method and therefore Option I should meet the accommodation needs of the various members of the community more successfully.
- 9.1.4 Both the housing number options could have negative impacts on SA Objectives 1, 3, 6 and 7. Substantial new housing development would be likely to give rise to major negative impacts on climate change and potentially have adverse impacts on biodiversity and pollution emissions. It is likely that a significant loss of Best and Most Versatile agricultural soils could not be avoided and a significant adverse impact on natural resources would be anticipated. The increase in waste generated from construction and occupation of housing would be likely to lead to a negative impact on SA Objective 8.

- 9.1.5 Given the high value and sensitivity of the landscape across the plan area, delivering large scale housing development across the SWLP region will potentially have an adverse impact on the landscape and townscape character of the local plan area. The impact of Option I on SA Objective 4 and 5 will be potentially higher than Option II due to higher housing numbers.
- 9.1.6 It is assumed that the availability of new housing would translate into reduced travel times and proximity to workplace/ employment sites for people living, visiting or working in the plan area. As a result, a minor positive impact on SA Objective 13 could be expected.
- 9.1.7 The consideration of housing number calculations does not provide any locational information as to where development would come forward and therefore impacts on SA Objectives 1, 5, 10 and 12, Flood Risk, Cultural Heritage, Health and Education are uncertain.
- 9.1.8 In terms of identifying a best performing option, Option II performs better overall (see SA Objectives 1-8). In the case of some objectives, it is difficult to identify a best performing option (see SA Objectives 10, 11, 12 and 13).

9.2 Employment number

	Office	General Industrial	Total
Stratford-on-Avon District	7.2	240.9	248.1
Warwick District	15.8	81.4	97.2

1	2	3	4	5	6	7	8	9	10	11	12	13
Climate Change	Flood Risk	Biodiversity & Geodiversity	Landscape	Cultural Heritage	Pollution	Natural Resources	Waste	Housing	Health	Transport	Education	Economy
--	0	-	--	+/-	--	--	-	0	-	-	+	++

- 9.2.1 The HEDNA has considered employment and land requirements across Coventry and Warwickshire to 2050. For office and general industrial land, a requirement of 345.3 hectares has been proposed to meet needs until 2050. For strategic B8 employment land (i.e. warehousing and distribution), a requirement of 709 hectares has been identified for the wider sub-region.
- 9.2.2 In the case of the plan area, the requirements for office space and general industrial have been apportioned to Warwick and Stratford-on-Avon as per the above table.
- 9.2.3 It is expected that the new employment land allocations and developments will generate more jobs and employment opportunities, create new investment opportunities and encourage creation of small and micro-businesses, therefore a major positive impact on SA Objective 13 is expected.
- 9.2.4 It is assumed that the new employment opportunities would be beneficial for people living, visiting or working in the plan area in terms of job creation and the opportunity to develop skills, therefore a minor positive impact on SA Objective 12 is anticipated.

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- 9.2.5 Development associated with new employment could have a major negative impact on SA Objectives 1 and 6 and minor negative impacts on SA Objective 3 as the increase in economic and industrial activities would give rise to adverse impacts on climate change and pollution emissions and could potentially be detrimental for the plan area's biodiversity and geodiversity.
- 9.2.6 Given the high value and sensitivity of the landscape across the plan area, delivering the employment number and the spread of development across the SWLP region will potentially have an adverse impact on the sub-region's landscape and townscape character and a major negative impact on SA Objective 4 could occur in the SWLP.
- 9.2.7 With new economic development, there may be increased pressure on existing transport infrastructure to meet the transport needs of people living, visiting or working in the plan area and therefore it is assumed that SA Objectives 10 and 11 may be negatively impacted. The increase in waste generated from construction and occupation would translate into minor negative impact on SA Objective 8.
- 9.2.8 With respect to the natural resources in the region, especially water and soil, the large-scale economic and industrial development would affect the quality of these resources and thus a major negative impact on SA Objective 7 could also be anticipated.

10 Conclusions and next steps

10.1 Selection and rejection

- 10.1.1 All reasonable alternatives have been evaluated using a wide range of receptors, sources and indicators. The likely impacts from development at different scales have been estimated and the results provide some idea, initially, about how different reasonable alternatives will perform in terms of sustainable development.
- 10.1.2 There are limitations to the assessment process and assumptions have been stated in the methodology section (see **Chapter 2**). Notwithstanding these, it is now possible to consider some of the results and what should be considered as the plan making moves into a key stage of public consultation.
- 10.1.3 The Councils will now assimilate the information and incorporate this into the next round of consultation before making decisions on selection and rejection. It is a requirement to identify the best performing reasonable alternatives, which has been done in the preceding chapters. Public consultation will help clarify the status of these best performing options which have been identified using and extensive analysis of secondary data.

10.2 Further research

- 10.2.1 The following additional research is recommended to better inform the SA of the plan:
- Biodiversity assessments of the Broad Locations
 - Landscape Assessment to explore character, sensitivity and capacity at the BLs.
 - Air Quality impact assessment at the plan level.
 - Cultural Heritage evaluation at the Broad Location scale.

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Habitats Regulations Assessments

Sustainability Appraisals

Strategic Environmental Assessments

Landscape Character Assessments

Landscape and Visual Impact Assessments

Green Belt Reviews

Expert Witness

Ecological Impact Assessments

Habitat and Ecology Surveys



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