
Gloucester, Cheltenham & Tewkesbury



Pre-Submission Draft Joint Core Strategy

Sustainability (Integrated) Appraisal Report

March 2014

Gloucester, Cheltenham & Tewkesbury Pre-submission Draft Joint Core Strategy

Integrated Appraisal incorporating Strategic Environmental Assessment, Habitats Regulations Assessment, Health and Equality Impact Assessment

Sustainability (Integrated) Appraisal Report:

For and on behalf of Enfusion Ltd

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Gloucester, Cheltenham & Tewkesbury Pre-submission Draft Joint Core Strategy (JCS): Sustainability (Integrated) Appraisal (SA) Report

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Non-Technical Summary (NTS)

This is the NTS of the Sustainability Appraisal Report

1. This is the Non-Technical Summary of the Sustainability Appraisal Report documenting the processes of Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA) within an Integrated Appraisal for the Gloucester, Cheltenham and Tewkesbury (GCT) Joint Core Strategy (JCS). This summary is an integral part of the Sustainability Report that accompanies the Pre-Submission Draft JCS for public consultation in 2014. It provides an outline of the SA process and findings, including how the SA has influenced the development of the plan, and in accordance with the requirements of the National Planning Policy Framework, the European SEA Directive and UK guidance on SA/SEA.

The Gloucester Cheltenham & Tewkesbury Joint Core Strategy

2. The purpose of the JCS is to bring together the strategic development management planning policies and strategic allocations for housing and employment development into one coordinated plan for the three administrative areas of Gloucester City, Cheltenham Borough and Tewkesbury Borough Councils. The JCS is the spatial expression of the vision and strategic objectives for the area and sets out how it will develop during the period up to the year 2031. The JCS provides the strategic direction and planning framework for development in the wider JCS area; each Council will prepare a District Plan for local development in its own area – and these will be consistent with the policies in the higher level JCS.
3. The JCS has been prepared in accordance with national planning requirements and informed by various technical studies, the SA, and the responses to consultation with the public, stakeholders and the regulators. The objectives of the JCS are aligned with the community ambitions in the 3 local authorities' adopted Sustainable Community Strategies that set out the long-term ambitions for the communities. The JCS sets out the key challenges for the JCS area and a Vision for the development of the area until 2031. This is followed by Strategic Objectives to deliver the Vision for the area and these have been grouped under the headline aims of the 3 Sustainable Community Strategies:
 - **A thriving economy:** Building a strong and competitive urban economy; Ensuring the vitality of Town centres; Supporting a prosperous rural economy.
 - **A sustainable natural and built environment:** Conserving and enhancing the environment; Delivering excellent design in new developments; Meeting the challenge of climate change.
 - **A healthy, safe and inclusive community:** Promoting sustainable transport; Delivering a wide choice of quality homes; Promoting healthy communities.

4. The Pre-Submission Draft JCS contains 2 strategic policies on the scale and distribution of new development; 15 sustainable development policies; 8 infrastructure policies; and one strategic allocations policy that sets out requirements and provides area boundaries with indicative site layouts for 9 strategic allocations. The JCS also includes proposals for monitoring and review.

SA and Integrated Appraisal: Strategic Environmental Assessment (SEA), Habitats Regulations Assessment (HRA), Equality Impact Assessment (including Health (EqIA))

5. The purpose of Sustainability Appraisal (SA) is to promote sustainable development through the integration of environmental, social and economic considerations in the preparation of Local Development Plans. This requirement for SA is in accordance with planning legislation¹ and paragraph 165 of the National Planning Policy Framework. Local Plans must also be subject to Strategic Environmental Assessment^{2 3} (SEA) and Government advises^{4 5} that an integrated approach is taken so that the SA process incorporates the requirements for SEA – and to the same level of detail. For the SA of the JCS, an integrated process has been undertaken that also addresses health and equality issues⁶ alongside the requirements of the Habitats Directive⁷. The Councils commissioned independent specialist consultants Enfusion to progress the appraisal work in May 2012.
6. SA is an iterative and ongoing process that informs plan-making by assessing developing elements of the plan, evaluating and describing the likely significant effects of implementing the plan, and suggesting possibilities for mitigating significant adverse effects and enhancing positive effects. UK Guidance suggests a staged approach to SEA⁸. Initially the scope of the SA is determined by establishing the baseline conditions and context of the JCS area by considering other relevant plans and objectives, and by identifying issues, problems and opportunities for the area. From this the scope of the SA is prepared and includes an SA Framework of objectives for sustainable development in the JCS area and which forms the basis against which the JCS is assessed.

Sustainability characteristics of the JCS area and likely evolution without the JCS

7. Baseline information about the JCS area has been collected and updated since the onset of the plan-making and SA processes. Relevant and sufficient information on the present and future state of the area has been collected in

¹ Section 19(5) of the 2004 Act and Regulation 22(a) of the Town and Country Planning (Local Planning)(England) Regulations 2012

² EU Directive 2001/42/EC

³ Environmental Assessment of Plans and Programmes Regulations, 2004

⁴ DCLG - National Planning Practice Guidance' 2014, ODPM - 'A Practical Guide to the SEA Directive' 2005, Planning Advisory Service – 'The Principles of Plan Making Chapter 6 - The Role of Sustainability Appraisal' 2013

⁵ DCLG, 2012 National Planning Policy Framework

⁶ To demonstrate compliance with the Equality Act, 2010

⁷ EU Directive 1992/43/EEC (and see also NPPF paragraphs 14 & 117)

⁸ ODPM A Practical Guide to the SEA Directive 2005

order to adequately predict the potential effects of implementing the JCS on the area. Baseline analysis provides the basis for making judgments about how the emerging content of the JCS might hinder or progress objectives for sustainable development.

8. **Communities & Housing:** The population in the JCS area has been gradually increasing for some years and is predicted to continue increasing. Following a similar trend to other Local Authorities in England, the proportion of the population under 15 years of age has been decreasing and the number of people over 65 has been increasing – and this is predicted to continue. Since the onset of the economic recession, numbers of housing completions have reduced in the JCS area. Between 2007 and 2011 there was a decrease in the number of affordable homes constructed in the area. Without the JCS providing the planning framework for housing development up to 2031, the trend in a shortage of homes would continue, issues of affordability could increase, and housing might not be located in most sustainable areas or where it is most needed (close to employment, sustainable transport, facilities and services).
9. **Economy, Employment & Education:** The percentage of the working population that is actively working has decreased since 2007 and the recession. However, despite the reduction, the unemployment rate for the area is still below the national average. Most employment in the JCS area is focused on public administration and the education, health, distribution, hotel/restaurants, banking/finance and insurance sectors, with some manufacturing. Cheltenham and Tewkesbury are well above the regional and national averages for those with NVQ4 or higher levels of education. Without the JCS employment may not be located where it is most needed or in the most sustainable locations; it would lead to a constraint on economic performance for the JCS area. The potential for uncoordinated retail development could have negative effects on the vitality and viability of town centres.
10. **Health & Equalities:** The health of people in the JCS area varies compared with the national average, although overall it is good and the percentage of the population with long-term limiting illness or disability is less than the national average. Cheltenham has lower levels of deprivation, higher life expectancy and lower levels of childhood obesity than the national average. The most common forms of deprivation in Gloucestershire relate to barriers to housing and services, crime and access to the natural environment. Without the JCS there could be sporadic development resulting in less efficient delivery of health and social services. Enhancements in green infrastructure and accessibility to green space, which is known to have beneficial effects on health, would be less and not coordinated.
11. **Transport & Accessibility:** The JCS area has excellent transport links being well served with rail and road connections, and Gloucestershire Airport. The majority of residents work within the area but there is also a high level of inward commuting from outside the JCS area, and private vehicle use places a strain on the urban areas in terms of traffic congestion and pollution. The rural areas have a high level of car dependency for commuting and access

to services. Without the JCS there is less likely to be any coordinated delivery of improvements to the transport infrastructure with negative effects likely on traffic and pollution.

12. **Water & Flooding:** The River Severn flows through the JCS area to the west of Tewkesbury and Gloucester and the JCS area lies within the Severn River Basin which is managed by the Environment Agency. Although there is a variety of good and poor quality water in the area, the Agency estimates that by 2015 there will be improvements. There is a shortfall in the supply/demand balance up to 2035 for the Severn Water Resource Zone and in the longer-term there will be a need for more water resources and treatment capacity.
13. Flood risk is a particular issue for the JCS area, especially for Tewkesbury and the west of Gloucester, with flood zones along the Rivers Severn and Avon and their tributaries influencing much of the pattern of development of the area. Given the lowland setting of the JCS area, an increase in flood extent is to be expected with climate change and flood waters might also be deeper, such that the flood hazard is likely to increase over time. Without the JCS there would greater pressure on water resources and quality, and potentially increased flood risk.
14. **Energy & Climate Change:** Between 2005 and 2009 carbon dioxide emissions per person reduced across the JCS area reflecting a national decrease. The urban areas of Gloucester and Cheltenham are well below the national average whilst that for Tewkesbury is higher and this is due to higher emissions from industry and road transport. Gloucestershire has less installed renewable energy capacity than other counties in South West England. As a result of climate change, the JCS area (in common with much of England) is likely to see warmer and drier summers with milder and wetter winters. The frequency of extreme weather events is also likely to increase. Without the JCS, adaptation and mitigation of the effects of climate change will be less.
15. **Landscape & Cultural Heritage:** The rural landscape of the JCS includes the Cotswold Area of Outstanding Natural Beauty, present in both the Cheltenham and Tewkesbury Local Authority areas. The landscape around the three principal settlements is varied, often attractive and can be sensitive to change. There is a substantial number of heritage assets in the JCS area including Gloucester's Roman remains, cathedral, canal and docks; the Regency architecture and spa origins of Cheltenham; and Tewkesbury's medieval abbey, architecture and waterways. Without the JCS future development is likely to have greater adverse effects on landscape and the settings of historic assets.
16. **Biodiversity:** There are a number important sites designated for nature conservation within the JCS area, including 2 European designated sites at Dixon Woods and Cotswolds Beechwoods, and 21 SSSIs and 10 Local Nature Reserves. Although the international and nationally designated sites are protected by legislation, without the JCS there will be less protection for locally important biodiversity and less likelihood for enhancements to green infrastructure with its benefits for both people and wildlife.

17. **Air Quality:** Within the JCS area the National Air Quality Objective for Nitrogen Dioxide is being exceeded in 5 areas – these Air Quality Management Areas are generally in locations that have congested or slow-moving traffic. Without the JCS it is likely that there would be a less coordinated approach between development and transport infrastructure with potential for greater negative effects on air quality.
18. **Waste, Minerals & Soils:** The amount of solid waste being produced and sent to landfill has been decreasing in recent years, and the average waste recycled in the county is around 41%. The decrease in production of building stone is likely to relate to the reduced economic activity in the UK generally. Greenfield land plays an important role in protecting the landscape setting and character of each urban area; protection of agricultural land is increasing in importance with concern over security of food production. Development is likely to increase waste generated as well as minerals and land required; this is likely to be more significant if not coordinated through the planning and design of development in the JCS.

Key Sustainability Issues, Problems and Opportunities

19. Plans and programmes that could affect the JCS were reviewed and considered together with information collected relevant to the characteristics of Gloucester, Cheltenham and Tewkesbury. From these studies the key sustainability issues and opportunities for the JCS were identified as follows:
 - Rich heritage assets; land designated as AONB and Green Belt very important in protecting unique setting and landscape character; and significant risks from flooding especially with changing climate;
 - Town centre hierarchy; Cheltenham the dominant retail centre; need to ensure provision of future employment land; educational attainment; difference in salary with pay in Gloucester less; car ownership lower in the rural areas of Tewkesbury;
 - Population growth and changes to the pattern of household formation; fewer affordable houses available; variations in deprivation, equality, education and health across area; the need to encourage a move away from transport using the private car.
20. The baseline and review of other plans was updated in 2013 and 2014 so that the basis for assessment remained current. This also demonstrated that the sustainability issues are still relevant and that the methods of assessment remain applicable.

How has the JCS been assessed?

21. An SA Framework was compiled and included SA Objectives that aim to resolve the issues and problems identified for development planning in the JCS area. This SA Framework, together with the baseline information, comprised the basis for assessment, and is summarised in the following table:

No.	Sustainability Objective
1.	Safeguard & enhance biodiversity & improve connectivity between green spaces & functional habitats
2.	Reduce contribution to climate change & support households & businesses in reducing their carbon footprint
3.	Adapt to the consequences of climate change
4.	Manage & reduce flood risk & surface water run-off
5.	Protect & improve the quality of natural resources including soil, water & landscape
6.	Minimise the use of natural resources including soil, water & greenfield through good design
7.	Protect & enhance the area's distinctive historic environment
8.	Improve accessibility, maximise the use of sustainable modes of transport & reduce the need to travel by the private car
9.	Minimise pollution and waste to landfill
10.	Ensure the availability of employment land & premises to encourage inward investment & support growth of existing businesses
11.	Support the vitality & viability of city & town centres as retain, service, leisure & learning destinations
12.	Reduce inequalities in wellbeing & opportunity
13.	Reduce crime & the fear of crime
14.	Improve access to health facilities & promote healthy lifestyles
15.	Ensure everyone has access to a decent home that they can afford & meets their needs
16.	Create, enhance, protect, connect & improve access to open spaces
17.	Improve access to education & life-long learning & enhance skills
18.	Protect & enhance cultural heritage & promote tourism

22. Each emerging part of the JCS, including options for distributing housing, employment and infrastructure, potential strategic allocations, and policies to control proposed development, was subject to SA. Using the SA Framework, the baseline information and professional opinion, the likely effects of the emerging JCS were assessed. The SA considered positive, negative and cumulative effects according to categories of significance as set out in the following table:

Categories of Significance for SA		
Symbol	Meaning	Sustainability Effect
x	Absolute constraints	Absolute sustainability constraints to development, for example, internationally protected biodiversity
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	Minor negative	Potential sustainability issues: mitigation and/or negotiation possible
+	Minor positive	No sustainability constraints and development acceptable
++	Major Positive	Development encouraged as would resolve existing sustainability problem

?	Uncertain	Uncertain or Unknown Effects
0	Neutral	Neutral effect

23. Sustainability Appraisal is informed by the best available information and data. However data gaps and uncertainties exist and it is not always possible to accurately predict effects at a strategic plan level. For example, specific significance of effects on biodiversity, heritage assets, or changes to local level traffic flows may depend on more detailed studies and assessments that are more appropriately undertaken at the next stage of planning - at the project or site level. Climate change impacts are difficult to predict as the effects are most likely to be the result of changes at a cumulative and regional/national level, and therefore a precautionary approach that seeks to deliver best practice mitigation and adaptation is the most appropriate approach.

What reasonable alternatives have been considered and assessed?

24. Throughout the development of the JCS, alternatives have been considered and appraised through the SA process in an iterative and ongoing way such that the findings of the SA have informed plan-making. In 2009, the early preparation of plan-making considered Issues and Key Questions and the consultation process invited consideration of the SA Objectives relevant to specific issues and questions. During 2010-2011 and Developing the JCS Preferred Option, 3 options for the spatial strategy and a number of options for potential strategic allocations and broad locations for potential housing and employment land were investigated through plan-making and subject to SA.
25. A spatial strategy option based on achieving stronger communities was not taken forward as the emphasis on affordable housing and community facilities would be likely to affect viability. A spatial strategy option based on addressing climate change was not taken forward as there were likely to be major negative effects on landscape and biodiversity from fewer larger development sites. A spatial strategy based on achieving economic resilience (together with elements from the other 2 options) was progressed as this provides the greatest opportunities for all in the JCS area; concentrating development in the urban centres reduces negative effects on the wider environment and maximises economic performance.
26. Taking the preferred strategic approach of an urban focus and extensions to the three centres, further studies identified Broad Locations around the edges for Gloucester city, Cheltenham town and Tewkesbury town. These were subject to initial SA (green, amber, red) and the findings informed the choice of those options to take forward. The principal constraints included landscape and historic constraints, risk of flooding, potential patterns of development, and the Green Belt constraint, indicating a limited number of development possibilities.

27. During 2012 and 2013 with the preparation of the Draft JCS and using updated evidence including development need, the strategic approach for development was subject to fresh SA and 3 options were considered – urban focus; rural dispersal; significant expansion/new settlement. Overall, the strategic option for distributing development through an urban focus has the most positive effects and more certainty, and has therefore been progressed for the JCS. The strategic option for rural dispersal has many negative and uncertain effects; it is unlikely to be able to provide the range and need of housing and therefore cannot progress sustainable development. It is unlikely that a major expansion or new settlement could be viable or deliverable within the timescale of the JCS; therefore not realistic or sustainable for development.
28. For the Draft JCS 2013 15 areas for strategic allocations, each with a range of options for quantity and type of development, were investigated and subject to SA. The options progressed were those that had the least negative effects on environmental factors with the most positive effects for socio-economic factors, including being in line with the overall strategy and being able to be delivered in the lifetime of the JCS.
29. In 2014, further studies identified that the objectively assessed need for housing was about 30,500 new homes, a significant reduction from the figure of around 33,200 new homes that was investigated in 2013 in the Draft JCS. This new figure was investigated together with 2 other housing scenarios for 33,200 and 30,900 new homes in a comparative SA. However, at this high level strategic SA did not identify any major differences between the 3 scenarios.

What are the likely significant effects of the JCS?

30. In March 2014, the changes made to the Draft JCS as a result of consultation and updated evidence were screened for significance with regard to the SA process. The changes to policies mostly removed uncertainty that had been identified in the earlier SA and strengthened positive effects. The overall reduction in housing numbers has a cumulative effect of reducing the negative effects on environmental quality from the quantum of new development proposed.
31. Overall, the implementation of the policies presented in the Pre-Submission Draft JCS were found to have significant positive sustainability benefits, reflecting the iterative and ongoing inputs from the SA, the wider evidence base, and comments received from public consultations on draft proposals. The key positive effects are summarised in the following table:

Likely Significant positive effects of the Pre-submission Draft JCS	
Relevant SA Objective	Positive Effects
Economy City & Town Centres Sustainable Communities	The JCS supports significant additional jobs in Policy SD2 with major positive effects for a range of employment opportunities focused on the urban areas with cumulative positive effects; appropriate

Health Education & Skills	size and scale for the rural areas. Support for economic development will have further positive effects for health and wellbeing, as well as education and skills – all contributing to more sustainable communities. The vitality and viability of existing city and town centres will also be maintained.
Climate Change Flooding Health	Flooding is a particular issue for the JCS area and Policy INF3 controls any increase in flood risk with positive effects – directly and cumulatively with regard to flooding and health risk. Renewable/low carbon energy is permitted if no adverse effects locally and this will have cumulative positive effects in the longer term.
Climate Change Natural Environment Sustainable Communities Biodiversity Green Space	The JCS sets out a strong focus on sustainable design requirements ensuring that compliance with the Code for Sustainable Homes will be met in the longer term. Policies SD4 and 5 on design and construction require sustainable standards that should have positive effects overall on climate change, energy efficiencies, and includes encouragement for multi-functional benefits of green infrastructure for people and wildlife.
Biodiversity Natural Environment Historic Environment Waste and Pollution Health Green Space	Green Belt, landscape and historic assets are particular issues for the JCS and Policies SD 6-9 will limit negative effects and provide for enhancement possibilities. The JCS has a strong commitment to Green Infrastructure in INF4 with major positive cumulative effects in the long term on many sustainability factors including biodiversity and human health.
Sustainable Communities Housing Economy Health Transport	Major long term and cumulative positive effects through meeting the housing needs of the JCS area which will also support economic objectives; Policies SD11-14 provide for a range of housing for different needs and to reflect the changing population; ensuring that community facilities will be provided with both short and long term positive effects. Provision of good quality housing will have major direct cumulative positive effects on health, supported by Policy SD15 supporting healthy lifestyles and INF1 promoting sustainable transport.

32. Alongside the positive effects, some negative effects were also identified, largely as a result of the overall, cumulative effect of increased housing, employment and associated infrastructure development in the plan area, relating to the strategic allocations proposed. The key negative effects are summarised in the following table:

Likely Significant Negative Effects of the Pre-Submission Draft JCS	
Relevant SA Objective	Negative Effects
Climate Change Natural Environment Transport Waste & Pollution	Increased contributions to greenhouse gases are likely given the overall amount of new development proposed and arising from transport and also the embodied energy inherent in construction (housing and employment) allocations.
Health Waste & Pollution Transport	Potential negative effects including noise, air quality reduction, pollution, congestion, loss of tranquility arising from the overall predicted growth in road based traffic. Implications for human health from increased pollution levels.
Natural Environment Biodiversity Green Space	Potential negative effects arising from significant physical changes to local areas; effects on landscape and indirect effects for biodiversity, where local level habitats and linkages disturbed or removed – cumulative in the longer term.

How could negative effects be mitigated and positive effects enhanced?

33. A key function of the SA and overall Integrated Appraisal process is to provide advice and recommendations to the development of the plan in order to mitigate identified negative effects and enhance positive effects. At each stage, these recommendations are taken forward into the stage of the plan making process, and included in lower level planning documents if relevant.
34. The proposed Policies and Strategic Allocations presented in the Pre-Submission Draft JCS reflect recommendations arising from all the previous SA work undertaken to support the plan development stages, and the Councils are commended for their effective and thorough integration of key sustainability themes and requirements throughout the progression of the JCS. In particular, the findings of the SA guided the selection of proposed strategic allocations by avoiding locations that might have significant negative effects, for example on internationally protected biodiversity. Thus negative effects have been mitigated through avoidance and by locating the strategic allocations with an urban focus.
35. Potential negative effects have been mitigated through strong policies that protect the natural environment and promote sustainable communities through requirements for appropriate provision and phasing of supporting infrastructure, such as community centres and transport. A strong feature of the JCS is the commitment to Green Infrastructure, recognising the many benefits it can provide, including managing flood risk, enhancing biodiversity, and providing recreational and tranquil spaces for people. Potential negative effects on local biodiversity will be mitigated through the requirement to conserve and improve biodiversity in new development, wherever possible –

and to be considered within a wider strategic approach to green infrastructure which will have cumulative positive effects in the long term.

Consultation

36. The emerging drafts of the JCS and its accompanying SA documents have been subject to statutory consultation at the scoping stage with the statutory bodies (English Heritage, Environment Agency, and Natural England) and wider consultation with stakeholders and the public. The SA accompanying each stage of plan-making since 2009 has been subject to public consultation through provision of the documents on the Councils' JCS website. Comments made and responses to these comments have been recorded and also made available. Thus consultation has been a vital ongoing and iterative element of the plan-making and the SA processes. The Pre-Submission Draft JCS and the SA Report reflect the findings of various technical studies and the responses received during consultation.

Monitoring proposals

37. Local planning authorities are required to produce Monitoring Reports (MRs) including indicators and targets against which the progress of the Plan can be assessed. There is also a requirement to monitor the predictions made in the SA and Government advises Councils to prepare a monitoring strategy that incorporates the needs of the two processes to make best use of shared information and resources. Monitoring proposals were suggested in the early SA scoping stage and will be progressed, including consultation, as the JCS progresses. The JCS Authorities will prepare a monitoring strategy that will include consideration of any specific requirements from the SA process.

Summary and Next Steps

38. The Sustainability Appraisal of the Pre-Submission Draft JCS has appraised the effects of the individual policies and strategic allocations as well as the overall effects of the plan, including cumulative effects. The Appraisal has identified that the proposed JCS will contribute to dealing with identified sustainability issues in the area, with major positive effects particularly for communities through the allocation of a range of new housing and employment land, together with improvements to Green Infrastructure and transport links. The key negative effects relate to the cumulative effects arising from amount of development growth, particularly traffic growth with some negative effects for emissions, climate change and wider health objectives. Overall, the policies and proposed locations provide a strong positive framework to guide sustainable development in the JCS area up to 2031.
39. The consultation responses received on the Pre-Submission Draft JCS and this Sustainability Appraisal Report will be used to inform the preparation of the JCS submission document scheduled for completion in 2014. Any significant changes to the policies or strategic allocations proposed in the JCS will be subject to further appraisal as necessary and a revised SA Report will be published alongside the JCS Submission Document.

40. The SA Report is available for review and comments alongside the Pre-Submission Draft JCS document for a 6 week period during Summer 2014. The documents are available to download from the JCS website at www.gct-jcs.org and at 'deposit locations' across the area, as set out in the Consultation Statement. Responses should be made using the questionnaire, an online version of which can be downloaded from the JCS website. Hard copies are also available at the deposit locations, and should be returned to the following address:

Joint Core Strategy Team
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1.0 Introduction

Purpose of SA & the SA Report

- 1.1 The purpose of Sustainability Appraisal (SA) is to promote sustainable development through the integration of environmental, social and economic considerations in the preparation of Local Development Plans. This requirement for SA is in accordance with planning legislation⁹, and as set out in paragraph 165 of the National Planning Policy Framework (NPPF). Local Plans must also be subject to Strategic Environmental Assessment^{10 11} (SEA) and Government advises^{12 13} that an integrated approach is taken so that the SA process incorporates the requirements for SEA – and to the same level of detail. For the SA/SEA of the Draft Joint Core Strategy (JCS), the partnership of Gloucester, Cheltenham and Tewkesbury Councils is undertaking an integrated process that also addresses equality issues¹⁴ alongside the requirements of the Habitats Directive¹⁵. The Councils commissioned independent specialist consultants Enfusion to progress the appraisal work in May 2012.
- 1.2 This Report documents the processes of Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) within an Integrated Appraisal for the Gloucester, Cheltenham and Tewkesbury (GCT) Draft Joint Core Strategy that addresses the areas covered by the Gloucester, Cheltenham and Tewkesbury Councils. This area includes the cities of Gloucester and Cheltenham, together with the town of Tewkesbury, and the surrounding rural areas defined by the Cotswold AONB to the south-east and by the River Severn and its flood lands to the north-west. It is not a formal sub-region or administrative area; however the Councils consider that there are strong functional, economic, infrastructure, policy and cross boundary relationships that determine that joint development plan preparation makes good planning sense.
- 1.3 The relationship between SA and SEA is discussed further in the following Section 2 of this SA Report; compliance with the SEA Regulations and the NPPF is detailed in Appendix I. This SA Report is being published for consultation with the Pre-Submission Draft Joint Core Strategy Document in accordance with NPPF requirements, SEA Regulations and SA Guidance.

The Gloucester, Cheltenham & Tewkesbury Joint Core Strategy

- 1.4 The purpose of the GCT Joint Core Strategy is to bring together the strategic and development management planning policies and strategic allocations for housing and employment development into one overall document for the

⁹ Section 19(5) of the 2004 Act and Regulation 22(a) of the Town and Country Planning (Local Planning)(England) Regulations 2012

¹⁰ EU Directive 2001/42/EC

¹¹ Environmental Assessment of Plans and Programmes Regulations, 2004

¹² DCLG - National Planning Practice Guidance' 2014, ODPM - 'A Practical Guide to the SEA Directive' 2005, Planning Advisory Service – 'The Principles of Plan Making Chapter 6 - The Role of Sustainability Appraisal' 2013

¹³ DCLG, 2012 National Planning Policy Framework

¹⁴ To demonstrate compliance with the Equality Act, 2010

¹⁵ EU Directive 1992/43/EEC (and see also NPPF paragraphs 14 & 117)

three administrative areas of Gloucester City, Cheltenham Borough and Tewkesbury Borough Councils. The JCS is the spatial expression of the vision and strategic objectives for the area and how it will develop during the period up to the year 2031. The JCS has been prepared with evidence¹⁶ arising from diverse studies, as a result of consultations¹⁷ and to meet with national planning requirements¹⁸. The JCS provides the strategic direction for development in the wider JCS area; each Council will prepare a Local Plan for non-strategic local development in its own area (and in conformity with the higher level JCS).

- 1.5 The preparation of the Pre-Submission Draft JCS has been informed by technical studies, including SA, and the responses to consultation with the public, stakeholders and the regulators. The JCS will guide the strategic development for the area for the period up to 2031. Further local details for non-strategic planning will be provided by District Plans for each of the 3 Council areas. The following table sets out the chronology of the JCS preparation, consultation and the accompanying SA/SEA stages:

Table 1.1: JCS and SA/SEA Stages and Documents

JCS Stage and Documents	SA/SEA Stage and Documents
Consultation	Consultation
Joint Study Area (JSA) studies 2004-6 Public consultation Jan- Feb 2005	Strategic SA (SSA) of JSA area informed SSA of sub-regional area in emerging SW Regional Spatial Strategy (RSS) RSS SSA statutory & public consultation Jan 2006
JCS Evidence gathering	SA/SEA Scoping Report Oct 2008 Five weeks statutory & public consultation Final SA/SEA Scoping Report Nov 2009
JCS Issues & Key Questions Public consultation Nov 2009 – Feb 2010	Consultees invited to consider relevant SA objectives for each issue and question.
JCS Strategic Options (addressing climate change, economic resilience, and stronger communities) for overall approach to distributing development in line with RSS; preferred urban focus investigated. Stakeholder consultation Feb-March & July 2010	Comparative SA/SEA summary with symbols for the 3 strategic options set out in Table 7 of Initial SA Report Dec 2011. Public consultation Dec 2011-Feb 2012

¹⁶ <http://www.gct-jcs.org/EvidenceBase/>

¹⁷ <http://www.gct-jcs.org/PublicConsultation/>

¹⁸ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

JCS Part 1 draft strategic approach (spatial portrait, issues, vision, strategic objectives) Informal on-line public consultation June-Aug 2010	SA compatibility analysis of Strategic Objectives against SA objectives reported in Tables 4 & 5 of Initial SA Report Dec 2011. Public consultation Dec 2011-Feb 2012
JCS Developing the Preferred Option - scenarios A, B, C, D; broad Locations (9 around periphery of Gloucester, 6 in Cheltenham, 6 in Tewkesbury) 3 approaches for next phase (maximising economic, preventing coalescence, best use of existing infrastructure) Public consultation Dec 2011-Feb 2012	Detailed SA undertaken of each Broad Location & Scenarios A-D (4 different quanta of development) summarised in Table 8 (p19 -26) and detailed in Appendix 4 of the Initial SA Report Dec 2011. Public consultation Dec 2011-Feb 2012
Draft JCS – vision, strategic objectives, preferred strategic approach, strategic allocations, strategic, core and delivery policies Public consultation 15 October – 25 November 2013	SA building upon the previous SA work & findings, and responses received to previous public consultation. SA of 3 Strategic Options for Distributing Development, options for potential Strategic Allocations, strategic, core and delivery policies, summarised in this SA Report (2013) and detailed in Appendices VI, VII, VIII, and IX. Public consultation 15 October – 25 November 2013
Pre-Submission Draft JCS Public consultation Summer 2014	SA Report Public consultation Summer 2014
Submission JCS Submission to Secretary of State; Examination Winter 2014	SA Report Submission to Secretary of State; Examination Winter 2014
Final document & Adoption of JCS Summer 2015	SA Adoption Statement Summer 2015

- 1.6 The objectives of the JCS are aligned with the community ambitions in the 3 local authorities' adopted Sustainable Community Strategies that set out the long-term ambitions for the communities. The JCS sets out the key challenges for the JCS area and a Vision for the development of the area until 2031. This is followed by Strategic Objectives to deliver the Vision for the area and these Objectives have been grouped under the headline ambitions of the three Sustainable Community Strategies:

- A thriving economy
- A sustainable natural and built environment

■ A healthy, safe and inclusive community

1.7 Chapter 3 of the JCS comprises 2 Strategic Policies on the scale and distribution of new development. Chapter 4 presents 15 Sustainable Development Policies associated with employment, retail, design, housing, health and environmental factors. Chapter 5 presents 8 Infrastructure Policies and Chapter 6 sets out the Strategic Allocations Policy. Chapter 7 sets out how the objectives and policies of the JCS will be monitored and reviewed; and the Proposals Plan is provided in Chapter 8.

1.8 The JCS Vision and Headline Strategic Objectives are set out below:

JCS Vision 2013 & 2014

By 2031 Tewkesbury Borough, Cheltenham Borough and Gloucester City will have continued to develop as highly attractive and accessible places in which to live, work and socialise.

The Joint Core Strategy area will be recognised nationally as enjoying a vibrant, competitive economy with increased job opportunities and a strong reputation for being an attractive place in which to invest.

The character and identity of individual communities will have been retained while improved access to housing will have addressed the needs of young families, single people and the elderly.

New developments will have been built to the highest possible standards of design and focused on protecting the quality and distinctiveness of each community. Established in sustainable locations, without increasing the risk of flooding, they will have been designed with sensitivity towards existing villages, towns and cities and with respect for the natural environment.

As a result of a strong commitment to the housing and employment needs of the existing and growing population, all residents and businesses will benefit from the improved infrastructure, which will include roads, public transport and services, and community facilities.

JCS Headline Strategic Objectives 2013 & 2014:

(Minor changes made in 2014 to Pre-Submission JCS as a result of 2013 consultation and updated evidence are shown in *italics* and ~~strike through~~)

- Building a strong *and* competitive *urban* economy
- Ensuring vitality of town centres
- Supporting a prosperous rural economy
- Conserving and enhancing the ~~natural~~ environment
- Delivering excellent design in new developments
- Meeting the challenges of climate change
- Promoting sustainable transport
- Delivering a wide choice of quality homes
- Promoting healthy communities

Integrated Appraisal: Sustainability Appraisal & Strategic Environmental Assessment

- 1.9 An integrated approach to appraisal and assessment brings resource efficiencies and allows complementary issues to be considered concurrently. The requirement to integrate SA/Strategic Environmental Assessment is also connected by the need for spatial plans to be formally assessed for their effects on internationally designated nature conservation sites as a result of amendments to the wildlife regulations.¹⁹ The Government's extant guidance recognises value in undertaking Habitats Regulations Assessment (HRA) and SA concurrently (although the findings and reporting of the two processes should be kept distinct)²⁰. In practice, the evidence base for both processes can be shared with Habitats Regulations Assessment findings and conclusions supporting the SA/Strategic Environmental Assessment.

Habitats Regulations Assessment

- 1.10 The Conservation of Habitats and Species Regulations (amendment) (2011) [the Habitats Regulations] require that HRA is applied to all statutory land use plans in England and Wales. The aim of the HRA process is to assess the potential effects arising from a plan against the nature conservation objectives of any site designated for its nature conservation importance.
- 1.11 The HRA screening, and the more detailed Appropriate Assessment (AA) consider if the potential impacts arising from the JCS are likely to have significant effects on these sites either alone or in combination with other plans and projects. The methods and findings of the HRA process, including the AA will be set out in a separate HRA (AA) Report that will be sent to the statutory consultee (Natural England) and placed on consultation for the wider public. The HRA findings have informed the SA.

Equality & Diversity Impact Assessment

- 1.12 In addition, the GCT Councils have chosen to integrate the health and equality impact assessment processes with the overarching SA/Strategic Environmental Assessment process. Health Impact Assessment is not a statutory requirement for Councils; however, health considerations are a requirement of the SEA process and thus the overall SA process. Public bodies have a duty²¹ to assess the impact of their policies on different population groups to ensure that discrimination does not take place and where possible, to promote equality of opportunity.
- 1.13 For the appraisal of the JCS the integration of health and equality concerns has focused on ensuring that these issues are well represented in the SA Framework [through objectives and decision-aiding questions] against which the emergent policies are being assessed. Consideration of health and

¹⁹ The Conservation of Habitats and Species Regulations (2010)

²⁰ Planning for the Protection of European Sites: Appropriate Assessment: Guidance for Regional Spatial Strategies and Local Development Documents (DCLG, August 2006)

²¹ Equality Act, 2010

equality issues has been addressed iteratively as the appraisal process has progressed. Details of the Equality Impact Assessment (EqIA) are also presented separately to demonstrate compliance with the Equality Act (2010) as Appendix X to this SA Report.

Consultation: Statutory, Public & Stakeholder Engagement

- 1.14 The SEA Directive requires that the authorities responsible for preparing plans should consult with the Consultation Bodies; for the GCT JCS these are the Environment Agency, Natural England & English Heritage in England, together with Natural Resources Wales and Cadw in Wales. The Directive does not require full consultation with the public or other bodies until the Environmental (in this case, Sustainability) Report on the draft plan is finalised. However, the Directive does require early and effective consultation with the public and the JCS Councils have sought wider consultation in order to better inform plan-making and decision-making. The JCS documents and the SA Reports that have accompanied them for public consultation were set out previously in Table 1.1. The most recent responses to consultation on the Initial SA Report (accompanying the Developing the Preferred Option Report in 2011) and the Draft JCS SA Report (accompanying the Draft JCS in October 2013) are provided here in this SA Report at Appendix V.

Summary of Compliance with SEA Directive & Regulations

- 1.15 The Strategic Environmental Assessment Regulations set out certain requirements for reporting the SEA process, and specify that if an integrated appraisal is undertaken (i.e. SEA is subsumed within the SA process, as for the integrated appraisal of the Plan), then the sections of the SA Report that meet the requirements set out for reporting the SEA process must be clearly signposted. The requirements for reporting the SEA process are set out in Appendix 1.

Structure of this Sustainability Report

- 1.16 Section 2 explains the approach taken to SA, incorporating SEA, Equality and Diversity Impact Assessment (EqIA) (including health) and the findings of the HRA, and details the methods used for each stage and each element of the developing JCS. The scoping process and outcome is summarised with details provided separately in Appendix II. Section 3 describes the characteristics of the JCS area, setting out the baseline conditions and the policy context, together with an indication of how the area might develop without the JCS. Details of baseline information and policy context are provided Appendix IV.
- 1.17 In consideration of the time that has progressed and the changes to the planning system, as well as recent case law on SEA that has guided current practice, Section 4 explains options in plan-making and alternatives assessment in SEA. Sections 5 and 6 summarise the earlier SAs in 2009 and 2011 with details provided in Appendix III. The SA findings from this earlier work informed plan-making at the time and informed ongoing plan-making through to 2013. The findings of the comprehensive SA undertaken in 2013 of

the emerging Draft JCS are summarised in section 7 with details provided separately in Appendices VI, VII, VIII, IX and XI.

- 1.18 Section 8 explains the changes that have taken place for plan-making and the SA/SEA. The Pre-Submission Draft JCS has been taken forward with refinement of the core policies and strategic site allocations presented in the 2013 Draft JCS. The policies have been updated and clarified as a result of updated evidence, the findings of the SA, and in consideration of consultation responses received. The Pre-Submission Draft JCS has been reorganised into 2 Strategic Policies, 15 Sustainable Development Policies, 8 Infrastructure Policies, and one Strategic Allocations Policy that better reflects the strategic purpose the JCS. Table 8.1 summarises all the changes and screens them for their significance with regard to SA/SEA requirements. For those changes that are considered to be significant, the SA was refreshed and/or updated.
- 1.19 The SEA Directive requires that the Report should include a description of the measures envisages concerning monitoring and such proposals are set out in section 9. A summary of the process and findings of the SA is provided in section 10. In accordance with the SEA Directive, a Non Technical Summary is also provided – at the beginning of this SA Report and also available separately. Appendix I provides signposting to explain how this SA complies with the requirements of the SEA Directive – and as required by the Directive.

2.0 Sustainability Appraisal Methods

Introduction

- 2.1 Sustainability (Integrated) Appraisal incorporating Strategic Environmental Assessment is an iterative and ongoing process that aims to provide a high level of protection for the environment and to promote sustainable development for plan-making. The role of SA is to inform the Councils as the planning authority; the SA findings do not form the sole basis for decision-making – this is informed also by other studies, feasibility and feedback from consultation. There is a tiering of appraisal/assessment processes (and see also later Figure 4.1) that align with the hierarchy of plans – from international/national through to local. SEA sets the context for subsequent project level studies during Environmental Impact Assessment (EIA) for major development projects.
- 2.2 This tiering is acknowledged by the NPPF (2012) in paragraph 167 that states that “*Assessments should be proportionate and should not repeat policy assessment that has already been undertaken.*” The JCS is a strategic planning document that provides strategic policy and allocations to guide promoters, communities and the three Councils in their decisions regarding proposed development. SA is a criteria-based assessment process with objectives and sub-objectives (decision-aiding questions) aligned with the issues for sustainable development that are relevant to the plan and the characteristics of the plan area.
- 2.3 This SA is an Integrated Appraisal that has incorporated the requirements of the EU SEA Directive, the findings from the EU Habitats Directive, and the findings of the Equality and Diversity Impact Assessment (EqIA). Since the Habitats Regulations Assessment (HRA) and the EqIA are driven by distinct legislation, the HRA Report and the EqIA Report are provided separately to clearly demonstrate compliance (although the findings of these assessments have informed the SA).
- 2.4 The scoping of the SA and the initial SA work was undertaken by Officers in-house. In June 2012, Enfusion were appointed as independent specialists to progress the SA work through to submission of the JCS.

Scoping and the SA Framework

- 2.5 During 2008 with the early stages of the JCS preparation, relevant plans and programmes (PP) were reviewed and baseline information was gathered and analysed by Officers to help identify the issues, problems and opportunities for the area (further detailed in the following section 3). The details of this analysis were reported in the technical Appendix²² to the Scoping Report 2008.
- 2.6 A Framework of SA Objectives and decision-aiding questions was developed from the key issues identified. This framework aims to promote and/or protect

²² <http://www.gct-ics.org/Documents/SustainabilityAppraisal/ConsultationScopingReport/JCS-SA-SR-Appendix2Oct08.pdf>

sustainability factors that are relevant to the JCS area and its timescale for implementation in the period up to 2031. It forms the basis against which emerging elements of the JCS are appraised using both quantitative and qualitative assessment respectively from the evidence base and professional judgment.

- 2.7 The Scoping Report set out the process undertaken and it was published on the JCS website in October 2008 and subject to consultation with the statutory bodies and the public. As a result of the responses received, the baseline, PP review and SA Framework were revised. The consultation comments were published on the JCS website in February 2009 along with a summary of how they were taken into account with the revised SA Framework was published in November 2009; details are available on the JCS website²³ and provided separately in Appendix II (SA Scoping Report 2008-9) as part of this SA Report.
- 2.8 The SA Framework of Objectives, Decision-Aiding Questions and Potential Indicators revised as a result of statutory and public consultation during scoping and published in November 2009 is set out in the following table (*including cross-references in italics for the topics in the SEA Directive and key requirements in the NPPF*):

Table 2.1: SA Framework

	Sustainability Objective	Decision-Aiding Questions Will the JCS...?	Potential Indicators
1	BIODIVERSITY Safeguard and enhance biodiversity and improve connectivity between green spaces and functional habitats <i>SEA Directive topics: biodiversity, for a, fauna NPPF paras 109, 117-119, 166</i>	<ul style="list-style-type: none"> ▪ Ensure that all designated sites of wildlife or geological interest are protected, restored and enhanced? ▪ Promote the creation of new habitats and sites of wildlife interest? 	<ul style="list-style-type: none"> ▪ Percentage of i) SSSI, ii) SAC, iii) SPA, iv) RIGS and v) Key Wildlife Sites land designated in a condition that is in favourable condition ▪ BAP Habitats ▪ Number and Area of land designated as Local Nature Reserves ▪ Percentage river length assessed as i) good ii) excellent biological quality
2	CLIMATE CHANGE MITIGATION Reduce contribution to	<ul style="list-style-type: none"> ▪ Reduce dependency on fossil fuels? ▪ Reduce carbon emissions from new and existing buildings and increase 	<ul style="list-style-type: none"> ▪ Total domestic CO₂ emissions ▪ Total industrial and commercial CO₂ emissions

²³ <http://www.gct-jcs.org/SustainabilityAppraisal/>

	<p>climate change and support households and businesses in reducing their carbon footprint</p> <p><i>SEA Directive topics: air, climatic factors</i> <i>NPPF paras 93-99, 120</i></p>	<p>energy efficiency?</p> <ul style="list-style-type: none"> ▪ Ensure that sustainable construction principles and standards are integrated into all development schemes, aiming for the highest standards possible? ▪ Encourage retrofitting of sustainable construction measures to existing buildings? 	<ul style="list-style-type: none"> ▪ Total road transport CO₂ emissions ▪ Total CO₂ emissions ▪ Megawatts of electricity from renewable sources ▪ Developments meeting Code for Sustainable Homes levels ▪ Annual gas sales – domestic; industrial ▪ Annual electricity sales – domestic; industrial ▪ Daily domestic water use
3	<p>CLIMATE CHANGE ADAPTATION</p> <p>Adapt to the consequences of climate change</p> <p><i>SEA Directive topics: water, air, climatic factors</i> <i>NPPF paras 93-104, 120, 166</i></p>	<ul style="list-style-type: none"> ▪ Ensure new and existing buildings, infrastructure and the environment are resilient to the effects of extreme weather events? ▪ Help people, businesses and the environment to adapt to the physical and social impacts of climate change? ▪ Ensure that appropriate Sustainable Urban Drainage systems are incorporated into new development? 	<ul style="list-style-type: none"> ▪ Number/percentage properties at risk from flooding ▪ Development incorporating Sustainable Drainage Systems ▪ New development permitted against Environment Agency advice on flood risk
4	<p>FLOODING</p> <p>Manage and reduce flood risk and surface water run-off</p> <p><i>SEA Directive topics: water, air, climatic factors</i> <i>NPPF paras 93-104, 120, 166</i></p>	<ul style="list-style-type: none"> ▪ Ensure flood risk is minimised? ▪ Ensure that surface water run-off is slowed and absorbed? ▪ Maximise water collection opportunities? ▪ Ensure that appropriate Sustainable Urban Drainage systems are incorporated into new development? 	<ul style="list-style-type: none"> ▪ Major developments against Environment Agency advice on flood risk ▪ Development incorporating Sustainable Drainage Systems ▪ Development including rainwater harvesting
5	<p>NATURAL ENVIRONMENT AND RESOURCES: QUALITY</p> <p>Protect and improve the quality of natural resources</p>	<ul style="list-style-type: none"> ▪ Improve the quality of water (both ground and river) ▪ Improve the quality of contaminated land? ▪ Protect and enhance the special character of the Cotswolds AONB and other 	<ul style="list-style-type: none"> ▪ Percentage of SSSI land designated in a condition that is in favourable condition ▪ Percentage river length assessed as i) good and ii) excellent biological quality

	<p>including soil, water and landscape <i>SEA Directive topics; soil, water, air, landscape</i> <i>NPPF paras 109-125</i></p>	<p>designated landscapes?</p> <ul style="list-style-type: none"> ▪ Protect and enhance landscape character? ▪ Ensure development is of high quality and locally distinctive? 	<ul style="list-style-type: none"> ▪ Percentage river length assessed as i) good and ii) excellent chemical quality ▪ Percentage of major developments incorporating a landscape character
6	<p>NATURAL ENVIRONMENT AND RESOURCES: USE</p> <p>Minimise the use of natural resources including soil, water and greenfield land through good design <i>SEA Directive topics; soil, water, air, landscape</i> <i>NPPF paras 79-92, 109-125</i></p>	<ul style="list-style-type: none"> ▪ Minimise loss of soils to development and improve soil quality? ▪ Ensure that water use is reduced and opportunities for water recycling are maximised? ▪ Encourage the redevelopment of previously developed land? ▪ Reduce the number of vacant and derelict buildings? ▪ Protect the individual setting of settlements 	<ul style="list-style-type: none"> ▪ Percentage of new development built on brownfield land ▪ Daily domestic water use ▪ Vacant Homes ▪ Area of land remediated ▪ Area of Green Belt
7	<p>HISTORIC ENVIRONMENT</p> <p>Protect and enhance the area's distinctive historic environment <i>SEA Directive topics: cultural heritage including architectural & archaeological heritage</i> <i>NPPF paras 126-141</i></p>	<ul style="list-style-type: none"> ▪ Protect and enhance the heritage and character of the area? ▪ Promote good design that enhances public realm and the surrounding built form? 	<ul style="list-style-type: none"> ▪ Percentage of conservation areas with up-to-date character appraisals ▪ Percentage of conservation areas with up-to-date management plans ▪ Percentage of major developments incorporating a landscape character assessment? ▪ Number of i) listed buildings of all grades, ii) registered historic parks and gardens, iii) registered battlefields and iv) scheduled ancient monuments ▪ Number of i) listed buildings, ii) conservation areas, iii) ancient monuments, iv) registered battlefields

			<p>and v0 archaeological sites at risk</p> <ul style="list-style-type: none"> ▪ Number of planning applications granted against the advice of archaeology department ▪ Number of locally indexed buildings
8	<p>SUSTAINABLE TRANSPORT</p> <p>Improve accessibility, maximise the use of sustainable modes of transport and reduce the need to travel by the private car</p> <p><i>SEA Directive topics: air, climatic factors, health, biodiversity</i></p> <p><i>NPPF paras 29-41</i></p>	<ul style="list-style-type: none"> ▪ Reduce the frequency and duration of journeys by private car? ▪ Reduce the need to travel by improving access to services, jobs, leisure and amenities? ▪ Maximise opportunities for cycling, walking and public transport? ▪ Reduce the use of high carbon modes of transport? 	<ul style="list-style-type: none"> ▪ Travel to work data: Commuting by private car ▪ Travel to work data: Working from home ▪ Travel to work data: Cycling, walking and public transport ▪ Number of Air Quality Management Areas ▪ Total road transport CO₂ emissions
9	<p>WASTE AND POLLUTION</p> <p>Minimise pollution and waste to landfill</p> <p><i>SEA Directive topics: air, climatic factors, health, biodiversity</i></p> <p><i>NPPF paras 123-125</i></p>	<ul style="list-style-type: none"> ▪ Minimise the volume of waste created during construction (including demolition waste)? ▪ Minimise waste created during occupation? ▪ Help to avoid the generation of excess waste? ▪ Maximise reuse, recycling and composting of waste? ▪ Dispose of waste in a sustainable manner? ▪ Reduce air pollution? ▪ Reduce light and noise pollution? 	<ul style="list-style-type: none"> ▪ Domestic waste going to landfill, recycled and composted ▪ Kg waste collected per capita ▪ % household waste recycled; composted; to landfill ▪ Air Quality Management Areas ▪ Total domestic CO₂ emissions ▪ Total industrial and commercial CO₂ emissions ▪ Total road transport CO₂ emissions ▪ Total CO₂ emissions
10	<p>THE ECONOMY</p> <p>Ensure the availability of employment land</p>	<ul style="list-style-type: none"> ▪ Enhance the local economy? ▪ Protect and enhance the vitality and viability of existing employment areas? ▪ Ensure the provision of 	<ul style="list-style-type: none"> ▪ VAT registrations/deregistration ▪ Income rank ▪ Employment

	<p>and premises to encourage inward investment and support growth of existing businesses</p> <p><i>SEA Directive topics: health</i> <i>NPPF paras 18-22</i></p>	<p>adequate land and premises to meet the needs of existing and new businesses?</p> <ul style="list-style-type: none"> Provide opportunities for new and existing businesses to develop in a sustainable way? 	<p>gained/lost</p> <ul style="list-style-type: none"> New firms as % of stock Business stock per 1,000 population % working population that is economically active % unemployed people that have been claiming for more than a year
11	<p>CITY AND TOWN CENTRES</p> <p>Support the vitality and viability of city and town centres as retail, service, leisure and learning destinations</p> <p><i>SEA Directive topics: health</i> <i>NPPF paras 23-27</i></p>	<ul style="list-style-type: none"> Support the vitality and viability of city and town centre as a retail, service, leisure and learning destination? Enhance the quality of the public realm? 	<ul style="list-style-type: none"> CACI Retail Footprint Retail ranking Retail floorspace Total estimated tourism spend City Centre hotel bedstock figures Residents that feel fairly safe or very safe outside after dark; outside during the day
12	<p>SUSTAINABLE COMMUNITIES</p> <p>Reduce inequalities in wellbeing and opportunity</p> <p><i>SEA Directive topics: health</i> <i>NPPF para 69</i></p>	<ul style="list-style-type: none"> Help to reduce inequalities in wellbeing and opportunity? Enable everyone to participate in local decision making? Help people to feel positive about the area they live in? 	<ul style="list-style-type: none"> Population living in most deprived Super Output Areas (Worst 10% and worst 25%) Electoral vote Percentage of people surveyed who feel that they can influence decisions affecting their local area Green Flag Award Public Open Space
13	<p>SUSTAINABLE COMMUNITIES</p> <p>Reduce crime and the fear of crime</p> <p><i>SEA Directive topics: health</i> <i>NPPF para 69</i></p>	<ul style="list-style-type: none"> Reduce opportunities for crime? Make people feel safer through good design? Reduce actual levels of crime and fear of crime? Reduce anti-social behaviour? 	<ul style="list-style-type: none"> Crime rates: Violent, Vehicle, Burglary, Racially Motivated and Drug Offences Residents that feel fairly safe or very safe outside in daylight/dark Number of ASBOs
14	<p>HEALTH</p> <p>Improve access to health facilities and</p>	<ul style="list-style-type: none"> Help people to live healthy lifestyles? Ensure access to open and green spaces? 	<ul style="list-style-type: none"> Early deaths from i) heart disease and Stroke, ii) Smoking and iii) Cancer

	<p>promote healthy lifestyles <i>SEA Directive topics: health</i> <i>NPPF paras 69-78</i></p>	<ul style="list-style-type: none"> ▪ Ensure access to local health facilities? ▪ Reduce health inequalities? 	<ul style="list-style-type: none"> ▪ Limiting illnesses ▪ General health good/fairly good
15	<p>HOUSING</p> <p>Ensure everyone has access to a decent home that they can afford and meets their needs</p> <p><i>SEA Directive topics: health</i> <i>NPPF paras 47-55</i></p>	<ul style="list-style-type: none"> ▪ Provide enough homes that people can afford? ▪ Provide quality and flexible homes that meet people's needs? ▪ Ensure that best use is made of the existing housing stock? 	<ul style="list-style-type: none"> ▪ Housing stock ▪ Total number of affordable and social rented properties ▪ Average house price to average income ratio ▪ Total net new housing completions ▪ Total additional affordable dwelling completions/acquisitions ▪ Number of houses in multiple occupation ▪ Vacant dwellings ▪ Average house price to average income ratio ▪ Unfit Dwellings (all housing types)
16	<p>GREEN SPACE</p> <p>Create, enhance, protect, connect and improve access to open spaces. <i>SEA Directive topics: health</i> <i>NPPF paras 69-78</i></p>	<ul style="list-style-type: none"> ▪ Ensure existing open spaces, gardens and allotments are protected and enhanced? ▪ Support the provision of new green space, including opportunities for wildlife, local food production and improved access for recreation and leisure? 	<ul style="list-style-type: none"> ▪ No. of parks with Green Flag/Green Pennant ▪ ANGST standards ▪ Access to public open space ▪ Access to woodland ▪ Registered parks and gardens ▪ Number and Area of land designated as Local Nature Reserves
17	<p>EDUCATION AND SKILLS</p> <p>Improve access to education and life-long learning and enhance skills</p> <p><i>SEA Directive topics: health</i></p>	<ul style="list-style-type: none"> ▪ Support the provision of accessible education, training and upskilling opportunities? ▪ Support the provision of an appropriately skilled workforce to meet the needs of existing and future businesses? ▪ Support the creation of flexible jobs to meet the changing needs of the population? 	<ul style="list-style-type: none"> ▪ Education Deprivation/ Skills: NVQ4 or higher/ Education: No qualifications ▪ 15 year olds achieving 5+ GCSEs at grades A* to /C ▪ Percentage of unemployed people claiming benefits who have been out of work for a year or longer

		<ul style="list-style-type: none"> Support community enterprises and the voluntary sector? 	<ul style="list-style-type: none"> Number of economically active on Job Seekers Allowance Job seekers allowance (caseload per 1,000)
18	<p>CULTURE AND TOURISM</p> <p>Protect and enhance cultural heritage and promote tourism</p> <p><i>SEA Directive topics: health, cultural heritage</i></p> <p><i>NPPF paras 126-141</i></p>	<ul style="list-style-type: none"> Increase public access to cultural facilities? Enhance the cultural heritage of settlements? 	<ul style="list-style-type: none"> Number of conservation areas Percentage of conservation areas with up to date: character appraisals and management proposals Culture south west Action Plan identified needs met Percentage of work force in tourism related industries Total estimated tourism spend Conservation Areas with Management Plans

2.9 This SA Framework formed the basis for appraising the developing JCS from 2009 through to 2014. The baseline information and PP Review were updated in 2010-11, during 2013 (including most notably for the implementation of the NPPF), and in 2014; the issues for the JCS area remained the same, the SA Framework was still relevant and retained for continuity of appraisal.

2.10 During the early stages 2008-2011 of SA and JCS preparation, the SA used a system of symbols and colours to represent the findings of the SA for different elements of the emerging plan as follows:

Table 2.2: SA Key to Nature and Significance of Effects (2008-2011)

- For high level appraisal of Spatial Options:

Symbol	Description
☺	Compatible
	Conflict
○	Neutral
✕	No relationship
?	Further information required

- For compatibility analysis of Strategic Objectives:

Symbol	Description
+	Positive correlation
○	No significant correlation

-	Likely significant impact
?	Further information required

- For high level appraisal of Scenarios A-D and Broad Locations:

Symbol	Description
Red	Major constraints to development
Amber	Potential constraints, avoidance and /or mitigation may be possible; uncertainty & more information needed
Green	Major benefits to development; no major constraints

- 2.11 For the most recent SA assessments in 2013, the SA Key was revised to clarify the approach being taken, provide consistency and this was used throughout for all elements of the JCS as follows:

Table 2.3: SA Key to Nature and Significance of Effects (2013 and 2014)

- 2.12 For SA of Strategic Options; Potential Strategic Allocations; Policies; Cumulative Effects Assessment; and SA of the overall implementation of the JCS:

Categories of Significance		
Symbol	Meaning	Sustainability Effect
x	Absolute constraints	Absolute sustainability constraints to development, for example, internationally protected biodiversity
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	Minor negative	Potential sustainability issues: mitigation and/or negotiation possible
+	Minor positive	No sustainability constraints and development acceptable
++	Major Positive	Development encouraged as would resolve existing sustainability problem
?	Uncertain	Uncertain or Unknown Effects
0	Neutral	Neutral effect
-	+	The SA Objectives 5, 6, 9, 13 and 14 consider more than one topic and as a result the plan could have different effects upon each topic considered. For example, Objective 6 includes a number of topics including soils, previously developed land, water use and Green Belt. A site/ policy within the plan could have a negative effect on the topic Green Belt but also have a positive effect on previously developed land and therefore this could lead to two symbols being shown.

- 2.13 For Compatibility Analysis of the Draft JCS Strategic Objectives (refined again after the 2011 consultation):

Neutral	○
Very Compatible	++
Compatible	+
Uncertain	?
Incompatible	-
Very Incompatible	--

- 2.14 Throughout the SA process, the appraisal was proportionate to the stage of the developing JCS and the elements of the plan that were being appraised. Strategic options were subject to high level strategic SA against each SA objective with a commentary describing the potential effects and possibilities for mitigation of any adverse effects or enhancements of positive effects. The early SA of broad locational search area was wide ranging, strategic and informed the plan-making by indicating where there were absolute constraints for development (for example, risk of effects to internationally protected biodiversity) and where there was uncertainty and more information was needed (for example, more detailed studies on landscape sensitivity, green infrastructure and strategic flood risk). The SA findings helped the JCS team to refine the search areas and to suggest preferred Broad Locations in the Developing the Preferred Option in 2011.

Appraising the JCS Issues & Key Questions (2009) and Developing the JCS Preferred Option (2011)

- 2.15 During the first stage of preparing the JCS, an Issues & Key Questions document was published in 2008. This document sought to generate debate to inform the preparation of JCS options to accommodate the development for the area proposed by the emerging RSS. It set out the key issues that need to be addressed; the vision for the area; the topics that should be covered; what policies could be included; and what the priorities should be. During the consultation period from December 2009-February 2010, consultees were invited to consider the SA objectives for potential options with their likely outcomes. The responses to the consultation on the Issues & Key Questions informed the next stage of plan-making – Developing the Preferred Option during 2010-2011.
- 2.16 The Strategic Objectives were revised as a result of the consultation and then subject to appraisal using the SA Framework in a compatibility analysis. Further revisions were made as a result of stakeholder consultation events during June 2010 and with the public through the website. Various options for an approach to distributing development through the JCS area were tested using the SA Framework using high level strategic appraisal. Detailed SAs were undertaken of the broad locational areas of search and the findings of the SA were used to inform the progress of the potential areas for strategic allocations. The SA methods and findings are detailed in the Initial SA Report²⁴

²⁴ <http://www.gct-ics.org/Documents/PublicConsultation/DevelopingthePreferredOption/JCSSAsummaryreport.pdf>

published in December 2011 and provided separately as Appendix III in this SA Report.

Appraising the Draft JCS (2013)

- 2.17 With the appointment of independent specialists Enfusion in 2012, the baseline and PP review were updated and aligned with the updating of the evidence base for effectiveness and good practice in SA and plan-making. The most notable changes in the planning system since the 2011 studies were localism, revocation of the SW RSS, and the implementation of the NPPF (further discussed in detail in section 4 of this SA Report). It was agreed that the SA Framework was still relevant to the issues for the JCS area and retained to demonstrate continuity of appraisal. Appendix I of this SA Report sets out a matrix with requirements of the SEA Directive and signposts where they are located within this report; it also demonstrates compliance with the requirements of the NPPF with regard to SA.
- 2.18 A compatibility analysis of the proposed Strategic Objectives for the JCS was undertaken again and the findings reported here in Appendix VI. Each element (strategic options; potential strategic allocations; strategic, core and delivery policies) of the emerging draft JCS document was assessed against the full SA Framework of objectives and decision-aiding questions and the updated baseline/PP review. Appraisal commentary was provided on how the proposed options would progress SA objectives, and where appropriate, recommendations for enhancement and mitigation were provided. Details of these SA matrices are provided in Appendices VI-IX of this SA Report and summary findings are set out in section 7.
- 2.19 The method used for the Sustainability Appraisal 2013 comprised the following elements:
- Identifying relevant baseline information and other plans or programmes that could affect the preparation of the JCS. This has been drawn from the baseline and other plans and programmes originally identified in the Scoping Report 2009, updated for Initial SA Report in 2011 and then subsequently updated to carry out this SA/SEA (see Section 3 following). At the later stages of JCS preparation in 2013, more detailed evidence was available and directly referenced where relevant.
 - Using the SA Framework as set out Table 2.3.
 - Taking account of SA/ SEA guidance documents including, in particular, the '*National Planning Practice Guidance – Strategic Environmental Assessment and Sustainability Appraisal*' (Department for Communities and Local Government, 2014), '*A Practical Guide to Strategic Environmental Assessment Directive*' (Department for Communities and Local Government, 2005) and Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment (European Commission, 2013).
 - Professional judgment drawing on the information above was used to identify the likely sustainability effects (including positive/negative, short - medium term (5-10 years) and long term (10 - 20 years plus),

- permanent/temporary, secondary, cumulative and synergistic) were described in accordance with Schedule 2 of the SEA Regulations.
- Significance of effects was determined using: the criteria set out in Schedule 1 of the SEA Regulations; professional judgment; and taking into account mitigation provided by early drafts of the JCS Policies and high level planning policy in the National Planning Policy framework (as appropriate). Categories of Significance in Table 2.3 were used to describe the level of significance attributed to each effect identified.
 - It is not always possible to accurately predict sustainability effects when considering plans at such a strategic scale. Impacts on biodiversity and cultural heritage, for example, will depend on more detailed information and studies at a site-level. Whilst climate change science is becoming more accurate, it is difficult to predict impacts likely to result from climate change, including synergistic effects. These uncertainties have been acknowledged in the appraisal matrices, baseline and other areas of this SA Report where applicable.
 - Each element of the JCS (strategic options, options for potential strategic allocations, and policies – core, strategic and delivery) was subject to SA to the same level of detail by the same team of appraisers.
- 2.20 Cumulative effects assessment was undertaken for implementation of the draft JCS, considering the proposed strategic allocations and other policies. The findings of the individual detailed SAs were compiled and professional judgment used to appraise the likely cumulative (including indirect and synergistic) significant effects for the whole JCS (intra-plan) and the draft JCS with other key plans (inter-plan). The detailed wording of the strategic, core and delivery policies made more certain the appraisal findings for certain topics such as transport and pollution.
- 2.21 The details of the SA assessment and findings are set out later in Section 7 of this SA Report.

Appraising the Pre-Submission Draft JCS 2014

- 2.22 The Draft JCS 2013 was further developed in consideration of consultation responses received and updated evidence. The proposed changes, deletions and additions were subject to SA screening to determine whether they would significantly affect the findings of the SA carried out in 2013. The details of the 2014 SA screening are provided in this SA Report in Section 8. Significant changes, such as a new Policy or deletion of a proposed strategic allocation, were subject to fresh SA using the same SA method as described in paragraphs 2.19- 2.20 above.

Consultation

- 2.23 The SEA Directive requires early and effective public consultation. Although statutory consultation is only required for scoping with the Consultation Bodies and with the public when the SA Report is finalised, the SA has been subject to public consultation at the scoping stage, with the Initial SA Report that accompanied the Developing the Preferred Option document in 2011 and the SA Report that accompanied the Draft JCS in 2013. The responses to

consultation on the SA scoping are recorded in the Response to Consultation, February 2009, and available on the JCS website. The responses to the 2011 and 2013 SAs are recorded here in this SA Report at Appendix V and include comment on the matters raised. Consultation remains an important part of the SA process and responses received from this public consultation in 2014 will be considered and views integrated into the final SA Report to accompany the Submission JCS document.

3.0 Sustainability Context and Baseline Characteristics

Introduction

- 3.1 The SA scoping process was undertaken jointly by the three councils and reported in the Scoping Report (October 2008). The full details of the review of relevant plans and programmes, the baseline information, and the characterisation and sustainability characteristics of the JCS area are contained in the SA Scoping Report, which can be viewed at <http://www.gct-jcs.org/>.
- 3.2 The baseline information and plans and programmes review have been updated at regular intervals throughout the SA process for the JCS, to ensure that the evidence informing the appraisal is current and relevant. Updates were carried out in autumn 2010 and autumn 2013 which were presented respectively in the 2011 Initial SA Report and the 2013 SA Report. Since then, there have been further updates to the baseline information and plans and programmes review, which are presented in Appendix IV of this SA Report.
- 3.3 This Section provides a summary of the updated baseline information and plans and programme review as well as the key issues, problems, objectives and opportunities for sustainable development and spatial planning that were identified as a result of such studies.

Review of Relevant Plans and Programmes

- 3.4 In order to establish a clear scope for the SA of the JCS it is necessary (and a requirement of the SEA Directive) to review and develop an understanding of the wider range of *"policies, plans, programmes and sustainability objectives"*²⁵ that are relevant to the Plan. This includes International, European, National, Regional and local level policies, plans and strategies. Summarising the aspirations of other relevant policies, plans, programmes and sustainability objectives promotes systematic identification of the ways in which the JCS could be influenced by and help to fulfill them.
- 3.5 The three councils conducted a thorough review of the relevant plans and programmes for the JCS, covering international, national, regional, sub-regional and local levels. This initial review is detailed in Appendix 1 of the Initial Sustainability Appraisal Summary Report published in 2011 and is available on the JCS website. Updates to this work to reflect more recent changes in policy and plan context are summarised in Appendix IV of this Report.
- 3.6 The review highlighted key sustainability themes for the JCS to address and these included:

²⁵ <http://planningguidance.planningportal.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/sustainability-appraisal-requirements-for-local-plans/>

- Biodiversity - protect, restore and enhance habitats, species and sites of geological interest.
- Climate change - reducing the causes of climate change and mitigating/adapting to the inevitable impacts of climate change.
- Water - conserve water resources and reduce pollution, flood risk and surface water run-off.
- Transport - promote a safe, efficient and integrated transport system that reduces the need to travel and dependency on high carbon modes of transport, and improve reliability and accessibility.
- Land resources - protect good quality land and soil, enhance sensitive and valued landscapes and encourage the re-use of previously developed land and buildings.
- Waste - reduce the amount of waste produced and encourage recycling and reuse to decrease the volume needing to be landfilled.
- Built environment - encourage a safe, clean and attractive environment and protect, enhance and improve understanding of the historic and cultural heritage.
- Pollution - reduce risks to health and the environment by reducing air and noise pollution and contaminated land.
- Economic development - encourage sustainable economic and tourism growth which ensures high quality employment opportunities, a skilled workforce and prosperity without harming environmental quality.
- Sustainable construction - promote more sustainable methods of construction to reduce resource, energy use and waste.
- Town centre - promote the vitality and viability of city and town centres.
- Social cohesion - reduce inequalities in health, education and learning, employment opportunities, crime and environmental quality and promote a more inclusive society, locally and globally
- Health - improve mental and physical health and wellbeing and reduce inequalities.
- Housing - improve access to a wide choice of affordable and safe housing, especially for disadvantaged members of society, ensuring that best use is made of existing housing stock.
- Green spaces - retain, create and enhance open spaces for recreation and sport to improve wellbeing.
- Community safety and empowerment - reduce crime levels and improve understanding and ownership of the local area and participation in decision-making.

Baseline Conditions & Likely Evolution without the JCS

- 3.7 Collection of baseline information is required by SEA legislation, and is fundamental to the SA process to provide a background to, and evidence base for, identifying sustainability problems and opportunities in the JCS area. The baseline analysis also provides the basis for predicting and monitoring effects of the JCS. To make judgments about how the emerging content of the plan will progress or may hinder sustainable development, it is essential to

understand the economic, environmental and social circumstances in JCS area today and their likely evolution in the future. The aim is to collect only relevant and sufficient data on the present and future state of the area to allow the potential effects of the JCS to be adequately predicted.

- 3.8 The SA Guidance provided by Government proposes a practical approach to data collection, recognising that information may not yet be available, and that information gaps for future improvements should be reported as well as the need to consider uncertainties in data. Collection of baseline information should be continuous as the SA process informs plan making and as new information becomes available.
- 3.9 SA Guidance advises that, where possible, information should be collated to include:
- 'comparators' - (i.e. the same information for different areas) - as points of reference against which local data may be compared
 - established targets, which will highlight how far the current situation is from such thresholds
 - trends - to ascertain whether the situation is currently improving or deteriorating
- 3.10 The three councils undertook a data collation exercise in 2008 for the scoping process and this was presented in Section 7 of the SA Scoping Report (Oct 2008) and cited in this SA Report at Appendix II SA Scoping Report. The data collation used existing information sources and did not involve primary data collection. The baseline information has been updated at regular intervals over the development of the JCS. Updates to the baseline information were carried out in the autumn 2010 and autumn 2011, but were not published at the time. More recent updating was carried out in July 2013 and March 2014 to ensure that the baseline information is up to date. A summary of the updated baseline information is provided below with the detailed updated baseline information presented in Appendix IV.

Communities & Housing

- 3.11 The population in the JCS area has been gradually increasing for a number of years. In 2011, it was estimated that Gloucester City had a population of 121,700 (Increase of 10.8 % since 2001), Cheltenham Borough a population of 115,700 (increase of 5.2 % since 2001) and Tewkesbury Borough a population of 81,900 (Increase of 7.2 % since 2001)²⁶. It's predicted that the population will continue to increase with an 11% increase in Gloucester, a 7% increase in Cheltenham and a 12% increase in Tewkesbury by 2021²⁷. The total population of the GCT area is expected to grow by 18.6% based on ONS 2011 projections and Cambridge Centre for Housing and Planning Research analysis) between 2011 and 2031²⁸. Following a similar trend to other Local Authorities in England, the proportion of the population under 15 years of age

²⁶ ONS – 2011 Census data & Gloucestershire Population Monitor (July 2012)

²⁷ Sub-national population projections (ONS 2011)

²⁸ Cambridge Centre for Housing and Planning Research (May 2013) The new Household Projections and their implications for the Cheltenham Borough Council, Gloucester City Council and Tewkesbury Borough Council areas

has been gradually decreasing and the number of people over 65 has been gradually increasing in all three local authorities²⁹.

- 3.12 Since the onset of the economic recession, housing completions have fallen dramatically in the JCS area³⁰. House prices rose dramatically in the late 20th Century and were accompanied by a low rise of annual income, which has created issues of affordability with first-time buyers. In recent years as a result of the economic recession Gloucester and Tewkesbury have seen a reduction in average house prices³¹. Within the JCS area Cheltenham has the highest house prices, followed by Tewkesbury and Gloucester. Gloucester has the highest number of affordable/social rented properties, followed by Cheltenham and then Tewkesbury³². Household sizes are very similar between all three local authorities; however, Cheltenham and Gloucester have a higher proportion of 1-person households than Tewkesbury, whereas Tewkesbury has a higher proportion of 2-person households. Between 2007 and 2011 there was a significant decrease in the number of affordable homes constructed in all 3 authorities. The current level of provision of affordable housing is insufficient to address long-term shortages³³. As of 2012, there were 4172 vacant dwellings in the JCS area which approximately equates to 2.9 % which is equal to the average found in Gloucestershire as a whole and just under the National average³⁴.
- 3.13 The number of housing benefit recipients has increased in all 3 authorities since 2007³⁵. Approximately 6 per cent of the JCS households were classed as being in fuel poverty 2008, with the highest percentage of households suffering from fuel poverty in Gloucester, followed by Cheltenham and then Tewkesbury³⁶. The percentage of people living in the Cheltenham and Gloucester without central heating, as at the 2011 Census, is slightly higher than the national average at 2.7%³⁷ for England and Wales.

Likely evolution without the JCS

- 3.14 The JCS will provide the planning framework that guides development in the area up to 2031. This includes setting the level of growth to be delivered during the life of the Plan and where it should be located. If the JCS wasn't implemented it could result in not enough homes being delivered to meet the needs of a growing population in the three Local Authorities. The right type and tenure of housing would also not be provided. It could also mean that new homes are not located in the areas they are needed most, with sporadic housing development occurring in areas that are not close to employment, public transport, services and community facilities. Without the JCS there would also be limited opportunities to provide affordable housing and new infrastructure.

²⁹ Ibid.

³⁰ Housing Trend Analysis & Population Household Projections May 2011, Gloucestershire County and Districts Planning Authorities

³¹ Land Registry of England and Wales

³² ONS - 2011 Census

³³ Housing Improvement Programme (HIP) Report (2008) & Cheltenham, Gloucester and Tewkesbury AMRs

³⁴ DCLG Live Tables on Dwelling Stock 2012 data.

³⁵ DWP Statistics: Housing Benefit Recipients (000's households, and percentage of housing stock)

³⁶ Centre for Sustainable Energy (CSE), Fuel Poverty Indicators 2008

³⁷ ONS - 2011 Census

Economy, Employment and Education

- 3.15 Employment in the JCS area is largely focused on public administration and the education, health, distribution, hotel and restaurants, banking, finance and insurance sectors, as well as some manufacturing. The percentage of working population that is economically active has decreased since 2007 for all 3 local authority areas; however, this number is still above the national and regional average³⁸. The unemployment rate has increased substantially since the economic recession in 2007 for all 3 authorities, with Gloucester having the highest rate in 2012. Despite the increase, the unemployment rates for the three authorities are still below the national average, with Tewkesbury's unemployment rate below the regional average³⁹. The number of people claiming Job-Seekers Allowance has also increased in recent years. Retail provision varies between and within locations high street chains to small independent shops. Vacancy rates have been increasing since the recession in 2007.
- 3.16 Average weekly earnings in the JCS area have increased since 2007, with earnings higher than the regional average for all three authorities and higher than the national average for Cheltenham. As for earnings, there are variations in skills and qualifications across the JCS area. The number of people with a NVQ4 or higher having increased in Cheltenham and Gloucester since 2007⁴⁰, while in Tewkesbury there has been a decline. Despite the decline, Tewkesbury and Cheltenham are still well above the regional and national averages for those with NVQ4 or higher levels of education. Gloucester is below the regional and national averages but has improved significantly.

Likely evolution without the JCS

- 3.17 The level of employment is expected to grow between 2011 and 2013. Three scenarios were tested using different assumptions leading to a range of expected employment growth between 15,600 and 28,200 jobs⁴¹. The JCS will provide the planning framework that guides development in the area up to 2031. This includes setting the level of employment growth to be delivered during the life of the Plan and where it should be located. If the JCS wasn't implemented it could result in less employment being delivered to meet the needs of the JCS area. It could also mean that new employment is not located in the areas where it is needed most. Without the JCS there could be sporadic development, which would make it more difficult to provide improvements to the education infrastructure needed to serve new development. There is also the potential for uncoordinated retail development which in turn could undermine the vitality and viability of designated town centres.

³⁸ NOMIS

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Nathaniel Litchfield & Partners (Jun 2013) Assessment of Housing Needs Addendum.

Health & Equalities

- 3.18 The health of people in the JCS area is mixed compared with the national average. Cheltenham generally performs better in terms of health than the other two authorities with lower levels of deprivation, higher life expectancy, lower early death rates from heart disease and stroke and lower levels of childhood obesity than the national average. In the JCS area, levels of adult physical activity and obesity are better than the national average⁴² and the percentage of the population with long-term limiting illness or disability is less than the national average⁴³.
- 3.19 In 2007, Gloucester City was ranked 142, Cheltenham Borough was ranked 187 and Tewkesbury Borough was ranked 205 out of 354 Local Authorities for deprivation⁴⁴. The most prevalent forms of deprivation in Gloucestershire relate to barriers to housing and services, crime and the living environment. There are 367 Local Super Output Areas⁴⁵ (LSOAs) in Gloucestershire, which are split between the County's 6 districts. According to the Indices of Deprivation, 27 of these LSOAs are among the most deprived 20% nationally. The majority of these are in Gloucester (18 LSOAs) and Cheltenham (8 LSOAs), with 1 in Tewkesbury. Two of these LSOAs are within the most deprived 5% nationally; these are Podsmead LSOA and Matson & Robinswood LSOA in Gloucester. This information demonstrates the inequalities that exist both within and between the urban areas of Gloucester and Cheltenham⁴⁶.
- 3.20 Incidents of robbery and household burglary have decreased in the three authorities between 2003 and 2012. Incidents of violent crime have increased in Gloucester and reduced in the other two authorities. The rate of drug offences throughout the JCS area has increased between 2003 and 2012.⁴⁷

Likely evolution without the JCS

- 3.21 The JCS will provide the planning framework that guides development in the area up to 2031. Without the JCS there could be sporadic development in the area, which could result in a less efficient delivery of health and social services. There would also be a less coordinated approach to the provision and enhancement of Green Infrastructure, which has the potential for indirect effects on health.

Transport and Accessibility

- 3.22 The JCS area has excellent transport links, being well served with rail, motorway and strategic road connections and Gloucestershire Airport. The M5 passes directly through the JCS area and links to the M4 in the south and M6 to the north. The majority of residents work within the JCS area,

⁴² Gloucestershire Public Health Intelligence Unit - Health Profile 2012

⁴³ Gloucestershire Equality Profile 2013 (Gloucestershire County Council, 2013)

⁴⁴ Office for National Statistics

⁴⁵ Set of geographical areas developed following the 2001 census to improve the reporting of small area statistics.

⁴⁶ South West Observatory Indices of Deprivation 2010 - Gloucestershire Summary

⁴⁷ Home Office Statistics

predominantly commuting between the three main settlements⁴⁸. The majority of residents use a car to get to work, with Gloucester and Tewkesbury having higher levels of commuting by private vehicle than the South West average of 58.7 %. The high level of inward commuting and private vehicle use places a strain on the urban areas in terms of traffic congestion and pollution. The rural areas have a much higher level of car dependency for commuting and access to services⁴⁹.

- 3.23 Gloucestershire Airport handled 16,238 passengers in 2010 and is the smallest airport in the South West. Passenger numbers have decreased by almost 20% when compared to 2009, which is a significantly greater decline than regional air passenger numbers at 1.9%⁵⁰.

Likely evolution without the JCS

- 3.24 The JCS will provide the planning framework that guides development in the area up to 2031. Without the JCS there is likely to be a less coordinated and effective delivery of improvements to the existing transport infrastructure and provision of new infrastructure. It could also result in sporadic development occurring in areas that are not close to employment, public transport, services and community facilities. This could have negative effects on traffic, accessibility and continue the current trend of private vehicle use.

Water & Flooding

- 3.25 The River Severn flows through the JCS area to the west of Tewkesbury and Gloucester. The JCS area lies within the Sever River Basin, which was assessed as having 29% of surface waters meet 'good' status or better and 71% do not meet 'good' status (621 water bodies). Of the groundwater bodies present in the river basin district 75% are at good status with the rest being poor status. It is predicted that by 2015, 17 per cent of surface waters - 152 water bodies - will show improvements and that 34 per cent will have at least good ecological status/ potential and 43 per cent of assessed surface waters will be in at least good biological status⁵¹.
- 3.26 The JCS area is contained within the Severn Water Resource Zone. It is predicted that there will be a net increase of approximately 31Megalitres/day (Ml/d) in water consumption from 2006 - 2035 in the Severn WRZ. The supply/demand balance for the zone became negative in 2006/2007. The current projected supply/demand shortfall is around 120Ml/d by 2035, taking into account the effects of climate change. Sustainable and efficient use of available water resources will be required and in the long term there will be a need for more water resources and treatment capacity to meet the supply/demand balance⁵².

⁴⁸ ONS - Area Based Analysis, Commuting Patterns from the Annual Population Survey, Local Authorities, 2010 and 2011

⁴⁹ ONS 2011 Census

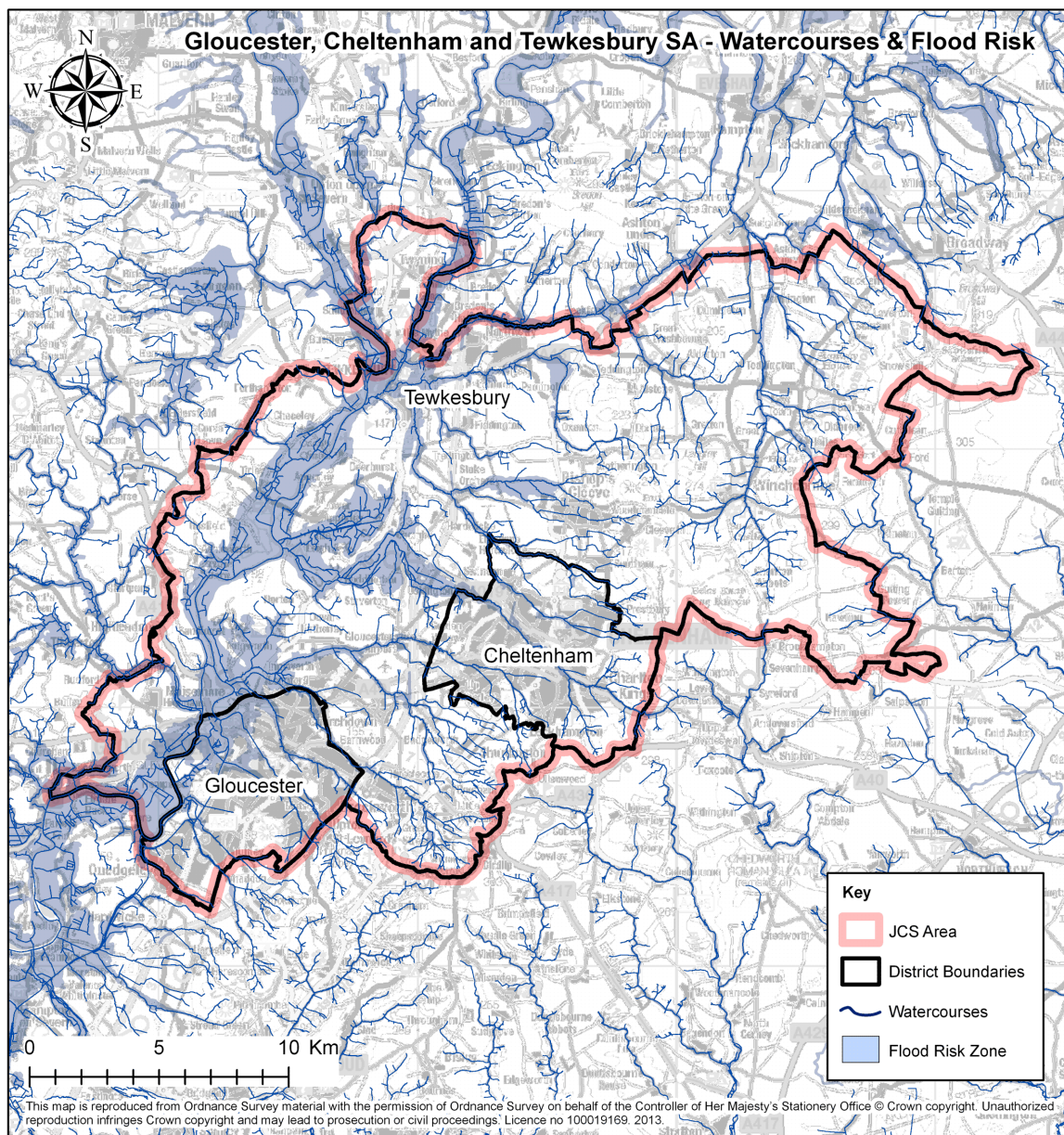
⁵⁰ Gloucestershire Airport Website

⁵¹ Environment Agency (2009) Severn River Basin Management Plan

⁵² Severn Trent Water Resource Management Plan (2010)

- 3.27 Flood risk is a particular issue for the JCS area, with flood zones along the Rivers Severn and Avon and their tributaries influencing much of the sub-region (Figure 3.1). Fluvial flood risk is a particular issue at Tewkesbury, where the Rivers Severn and Avon meet as the topography is flat and the underlying bedrock largely impermeable. During high flows there is substantial risk of these rivers flooding local areas, such as the major flood event that occurred in July 2007. Given the lowland setting of the JCS area, an increase in flood extent is expected, but flood waters might also be deeper. This means that the flood hazard is likely to increase over time, creating increased risk to humans, more damage to property and higher economic damages⁵³.

Figure 3.1: Watercourses and Flood Risk



⁵³ Gloucester City Council Strategic Flood Risk Assessment for Local Development Framework Level 1 Volume 1 - FINAL September 2008

Likely evolution without the JCS

- 3.28 Without the JCS it is likely that there would be a less coordinated approach to addressing the impacts of future development on the water environment. The Plan will contain policies to ensure that new development is located and designed to minimise impacts on the water environment, such as ensuring that surface water is properly managed and that water efficiency measures are incorporated into any proposals. There could also be a lack of coordination between development and the delivery of necessary water supply and waste treatment infrastructure. Without the JCS there would be greater pressure on water resources and quality and the potential for increased flood risk.

Energy & Climate Change

- 3.29 Between 2005 and 2009, CO₂ emissions per capita reduced across the JCS area, reflecting a national decrease in emissions (although the sharp decline 2008-2009 is attributed to the economic recession and consequent decline in industry and transport emissions). The urban areas of Cheltenham and Gloucester have per capita emission totals well below the national average. However Tewkesbury's is higher, with much of this attributable to higher emissions from industry and road transport⁵⁴.
- 3.30 In 2009, Tewkesbury consumed the highest amount of energy at 4,470 kWh per consumer, followed by Gloucester at 4,031 kWh per consumer and then Cheltenham at 3,997kWh per consumer. Tewkesbury's energy consumption per consumer is slightly higher than the average for region and 8% higher than national average⁵⁵. Installed renewable capacity is increasing across the JCS area, reflecting the situation nationally. In 2012, the UK has a total installed renewable energy capacity of 20.304 MW. This figure is almost quadruple the figure for 2007 (5.174 MW). Gloucestershire has less installed renewable energy capacity than other counties within the South West, with Devon and Cornwall having the most. For the South West, renewable energy capacity increased from 217 MW in 2010/11 to 525 MW in 2011/12⁵⁶.
- 3.31 As a result of climate change the JCS area is likely to see warmer and drier summers and milder and wetter winters. The frequency of extreme weather events are also likely to increase and sea levels will likely rise⁵⁷.

Likely evolution without the JCS

- 3.32 Without the JCS it is likely that there would be a less coordinated approach to addressing the causes and impacts of climate change as well as reducing energy consumption. Future development would be less likely to adapt to the predicted effects of climate change and incorporate renewable and low carbon technologies. Sporadic development could occur in areas that are

⁵⁴ DECC Local Authority Carbon Dioxide Figures 2010

⁵⁵ South West Observatory Local Profile 2011

⁵⁶ Regen South West Renewable Energy Progress Report: South West 2012 Annual Survey.

⁵⁷ Tewkesbury Borough Council Climate Change Strategy 2010 - 2015.

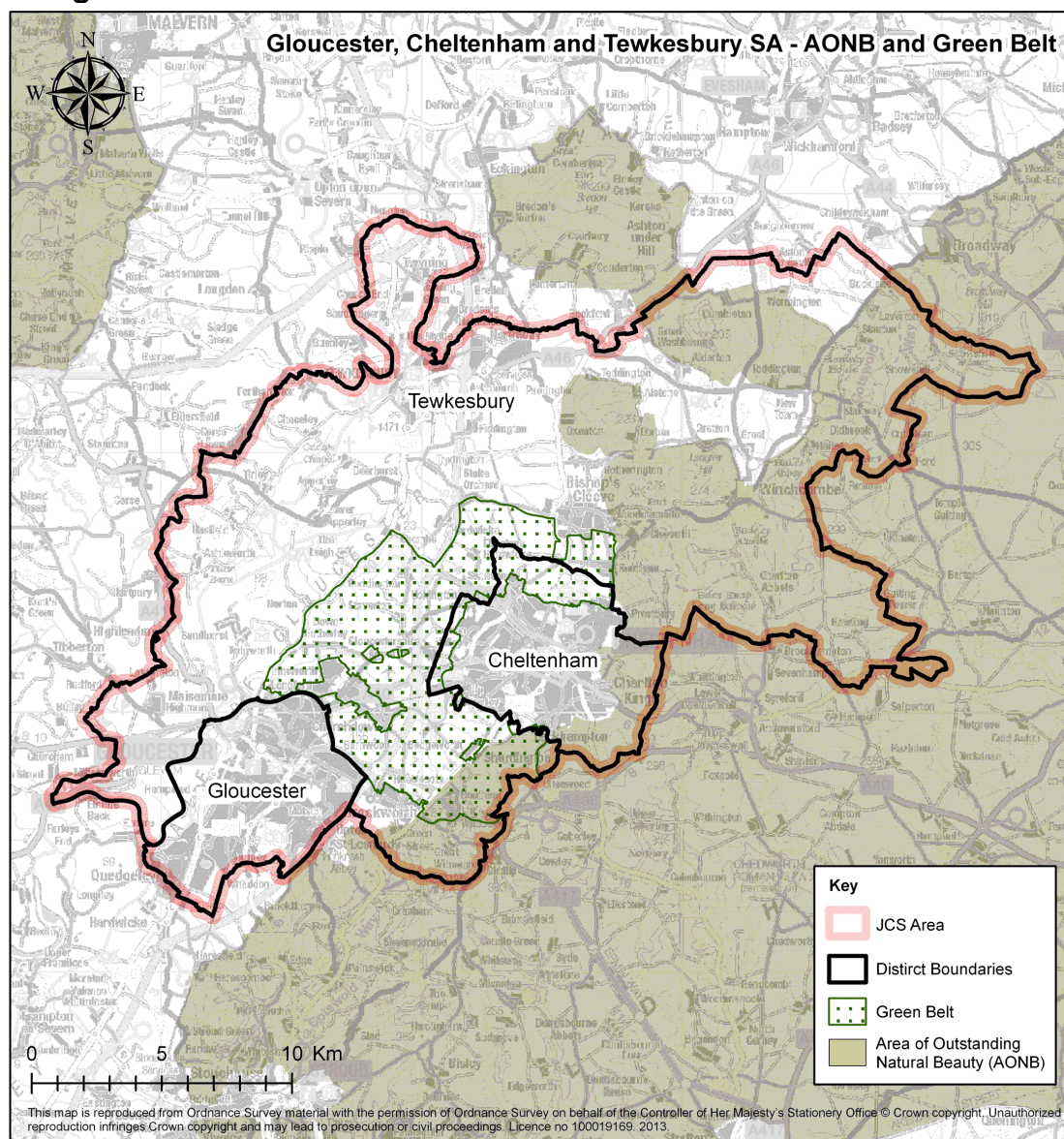
not close to public transport and/or services and community facilities, which would also place higher reliance on the private car.

Landscape and Cultural Heritage

- 3.33 The rural landscape of the JCS area includes the Cotswold Area of Outstanding Natural Beauty, which is present in both Cheltenham and Tewkesbury Local Authority areas (Figure 3.2). The landscape around the three principal settlements in the JCS area is varied, often attractive and can be sensitive to change. Gloucester is situated at the head of the Severn Estuary with the city itself located within the Vale of Gloucester. Cheltenham sits at the foot of the Cotswold escarpment and Tewkesbury lies at the top of the tidal reach of the river Severn and is formed at the confluence of the river Severn and River Avon⁵⁸.
- 3.34 There are 86 Scheduled monuments in the JCS area, with the majority (56) within Tewkesbury Borough. Within the JCS area there are also 35 Conservation Areas of special architectural or historic interest, which provides a good indicator of the quality of the built environment in Cheltenham, Gloucester and Tewkesbury Borough. The Central Conservation Area in Cheltenham is understood to be the largest such area designated in the UK.
- 3.35 There are a substantial number of heritage assets within the JCS area, which are of significance because of their historical, archaeological, architectural or artistic interest. Such assets require careful protection and management in accordance with national guidance where change is proposed. Important historical assets in the JCS area include Gloucester's Roman remains, cathedral, canal corridor and docks; the Regency architecture and spa origins of Cheltenham; and Tewkesbury's medieval abbey, architecture, War of the Roses Battlefield and waterways. There are 4,886 Listed Buildings in the JCS area.

⁵⁸ Joint Core Strategy Landscape Characterisation Assessment and Sensitivity Analysis

Figure 3.2: AONB and Green Belt



Likely evolution without the JCS

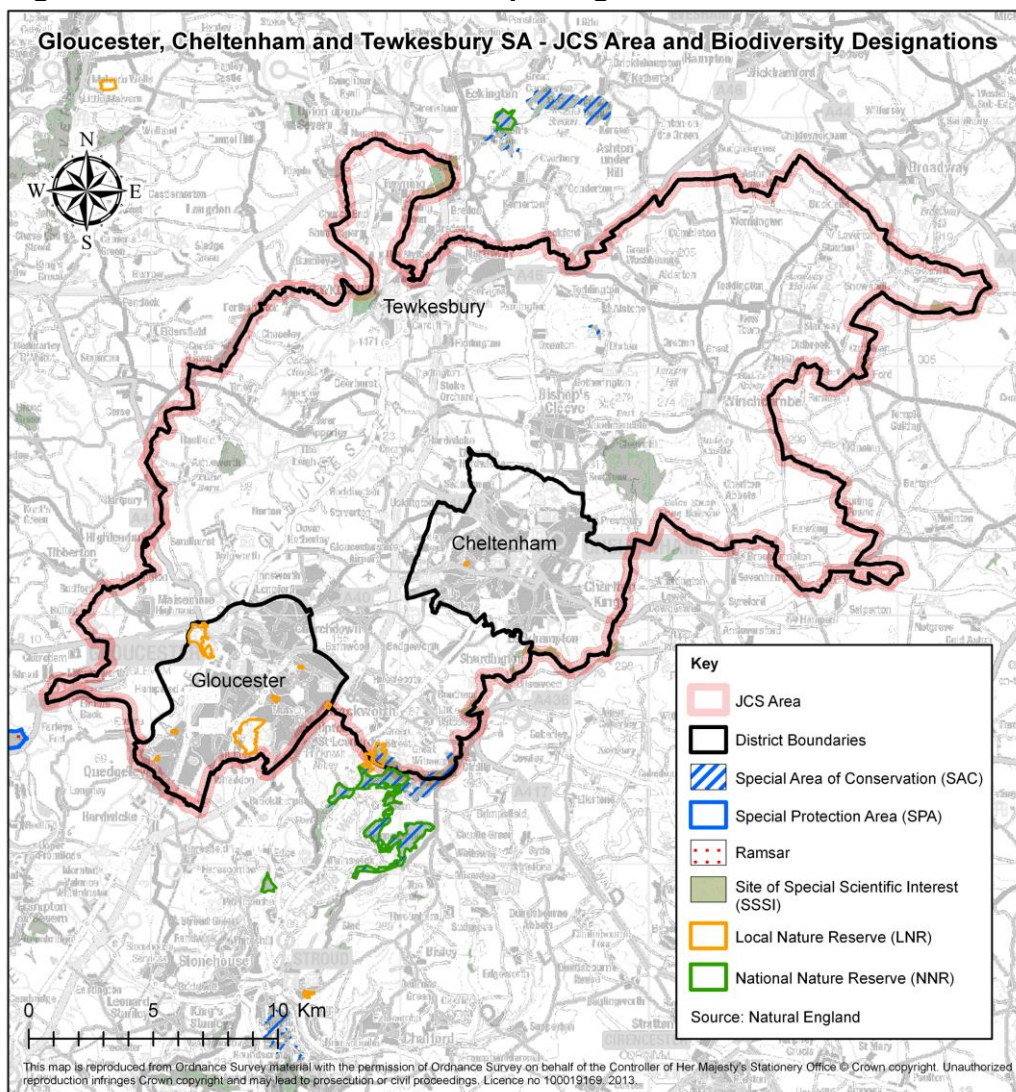
- 3.36 Without the JCS it is likely that there would be a less coordinated approach to protecting the landscape and heritage within the Plan area. There is the potential for future development to have a greater impact on the landscape and the setting of heritage through sporadic development and the absence of detailed and up to date design policies.

Biodiversity, Fauna and Flora

- 3.37 There are a number of important sites designated for nature conservation within the JCS area (Figure 3.3), which includes two European designated sites. Dixton Woods Special Area of Conservation (SAC) lies wholly within the JCS area and Cotswold Beechwoods SAC lies partially within the Plan area. There are also 21 Sites of Special Scientific Interest (SSSI) within the JCS area, with 18 of these within Tewkesbury Borough. There are 9 Local Nature reserves in Gloucester and one in Cheltenham Borough. The River Sever flows

through the JCS area and is eventually designated as the Severn Estuary SAC, Special Protection Area and Ramsar.

Figure 3.3: JCS Area and Biodiversity Designations



Likely evolution without the JCS

- 3.38 Without the JCS it is likely that there would be a less coordinated approach to the protection and enhancement of biodiversity within and surrounding the Plan area. Important sites for biodiversity are already protected through higher level documents; however, JCS policies will also help to protect locally important and wider biodiversity areas as well as improve Green Infrastructure which will also have positive effects on biodiversity.

Air Quality

- 3.39 Within the JCS area National Air Quality Objectives for nitrogen dioxide (NO₂) are being exceeded in five areas. In Gloucester, three Air Quality Management Areas (AQMAs) have been designated at Barton Street, Priory

Road and Painswick Road⁵⁹. There are also AQMAs in Tewkesbury⁶⁰ and Cheltenham⁶¹, which were designated in 2008. Cheltenham's AQMA was updated in 2011 to include the whole of the Borough. AQMAs are generally in locations that represent traffic hotspots in narrow 'corridor' streets where stationary or slow moving traffic occurs.

Likely evolution without the JCS

- 3.40 Housing and employment growth will inevitably place increased pressure on the existing transport network. There is the potential for increased levels of traffic and therefore congestion, which could increase levels of atmospheric pollution in the JCS area. Without the JCS it is likely that there would be a less coordinated approach between development and transport infrastructure, which means there is the potential for greater negative effects on air quality. The JCS will contain policies that require proposals for development to minimise impacts on transport infrastructure and air quality as well as encourage them to maximise opportunities for people to walk and cycle.

Waste, Minerals & Soil

- 3.41 Gloucestershire County Council landfilled 178,046 tonnes in 2009/10, which was the third highest amount in the South West⁶². In 2009/10 Tewkesbury Borough Council has the eight highest amount of residual waste in the South West with 614.13 kg/household, which was the highest to be produced in the County. Cheltenham Borough Council had the ninth highest amount of residual waste in the South West with 693.85 kg/household and Gloucester City Council had the tenth highest amount of residual waste in the South West with 611.95 kg/household⁶³. However, it should be noted that the amount of municipal solid waste produced and therefore the amount being sent to landfill in the County has been decreasing in recent years⁶⁴.
- 3.42 Gloucester City, Cheltenham Borough and Tewkesbury Borough Councils recycled from 31.5% to 33% of their waste in 2009/10, which was less than the County average of 41.63%. Cheltenham has a higher rate of waste minimisation statements submitted with major development applications at 31% in 2010 to 2011, with Gloucester at 24% and Tewkesbury at 14%⁶⁵. Recently, there has been a decrease in the number of waste minimisation statements submitted in the County⁶⁶.
- 3.43 During 2011 there was an increase (0.07mt) of crushed rock limestone and a decrease (0.05mt) of Sand and Gravel produced in Gloucestershire. There was also a decrease of natural building and roofing stone from 2010 to 2011,

⁵⁹ Gloucester City Council Website - Air Quality: <http://www.gloucester.gov.uk/LGNL/Communityandliving/Pollution/Pollutioncontrol-airquality/EnvironmentalHealth-AirQualityinGloucester.aspx>

⁶⁰ Tewkesbury Borough Council Website - Air Quality: <http://tewkesbury.gov.uk/index.aspx?articleid=1929>

⁶¹ Cheltenham Borough Council - Air Quality: http://www.cheltenham.gov.uk/info/200075/pollution/288/air_quality

⁶² South West Observatory Local profiles: Environment 2011

⁶³ Ibid.

⁶⁴ Gloucester County Council Waste & Minerals AMR 2011 - 2012

⁶⁵ Ibid.

⁶⁶ Ibid.

which is likely to be as a result of the continued economic position of the UK through the period.

- 3.44 Cheltenham has seen a slight decrease (from 2010/11 to 2011/12) while Gloucester has seen an increase (from 2009/10 to 2010/2011) in homes being developed on previously developed land. In 2010, the proportion of dwellings built on previously developed land (excluding conversions) was 60% in the South West compared to 73% in England⁶⁷ & ⁶⁸.

Likely evolution without the JCS

- 3.45 Housing and employment growth is likely to increase the amount of waste generated as well as minerals and land required. Without the JCS it is likely that there would be a less coordinated approach between development and the provision of waste infrastructure. JCS policies will seek to ensure that proposals for development minimise waste and the use of minerals as well as increase recycling. The JCS will seek to focus development on previously developed land; therefore without the Plan there is the potential for more development on Greenfield and agricultural land.

Key Sustainability Issues, Problems and Opportunities

- 3.46 It is important to distil the key sustainability issues, problems and objectives relevant to the JCS area from the collated baseline information and consideration of the particular character of the area. These issues are considered to be priorities for consideration through the Sustainability Appraisal, and the SA Framework of sustainability objectives (detailed in Section 2) seeks to address to them.
- 3.47 The following key sustainability issues were identified in the SA Scoping Report (2008) and are priorities for sustainability, arising from the particular characteristics, pressures and opportunities affecting the JCS area. These key sustainability issues are still relevant based on the baseline information updated through 2013 (and including the NPPF); and accordingly, the SA Framework of SA objectives and decision-making questions is still relevant and applicable.

Key Environmental Sustainability Issues

- **Conservation Areas and Listed Buildings** – significant conservation area coverage and high numbers of listed buildings
- **Condition of SSSI** – Neither Cheltenham or Tewkesbury are achieving the target for 95% of SSSI to be in either favourable or unfavourable but recovering
- **Land designated as AONB or Green Belt** – plays an important role in protecting the unique setting and landscape character of Gloucester, Cheltenham and Tewkesbury

⁶⁷ South West Observatory - The Changing State of the South West 2012

⁶⁸ Gloucester, Tewkesbury and Cheltenham Annual Monitoring Reports

- **Flooding** – there are significant risks from flooding, especially with changing climate.
- **Sustainable Homes** – there are significant sustainability risks to accommodating the proposed housing, which could be ameliorated by the requirement for all homes to be zero carbon by 2016.
- **Air Pollution** – there are an increasing number of Air Quality Management Areas in the JCS Area.
- **Brownfield land** – high take-up in both Gloucester and Cheltenham means that fewer sites available bringing pressures on garden areas, which potentially impacts on quality of life, opportunities for food growing, wildlife and flooding
- **Transport** – Gloucester and Cheltenham are the main economic hubs for Gloucestershire and draw in significant commuters. This puts considerable strain on central areas in terms of congestion and pollution.

Key Economic Sustainability Issues

- **Town Centre Hierarchy** – dominance of Cheltenham as a retail centre over Gloucester and Tewkesbury
- **Business Stock (per head of population)** – significant differences between the authorities
- **Employment Land Provision** – the need to ensure the provision of future employment land supply
- **Unemployment** – rates of residents being unemployed for more than one year and claiming benefits. Unemployment has been increasing since 2007.
- **Education attainment** – percentage of population attaining NVQ Level 4 and above
- **Gross Weekly Pay** – pay in Gloucester is significantly lower than in Cheltenham and Tewkesbury
- **Car Ownership** – percentage of the population owning no car, this figure is lower in Tewkesbury Borough than the other two Authorities
- **Hotel Bedstock** – number of hotel bed spaces available within the 3 local authority areas

Key Social Sustainability Issues

- **Population and Household Size** – The population is growing slowly across the JCS area with most of increase in working age population; moving towards an ageing population. Fewer children could mean a smaller workforce in future. Number of smaller households increasing.
- **Affordability** – house prices have risen dramatically and fewer affordable homes are available. House price to income ratios are very high, especially in Cheltenham.
- **Vacant Homes and Second Homes** – a significant proportion of the JCS area's housing stock is either vacant or used as a second home.
- **Social Deprivation Inequalities** – there are significant variations in the level of deprivation between and within the urban areas covered by the JCS. The JCS area houses eight of the most deprived wards in England.

- **Inequality in Labour Markets** – differentials between the number of claimants receiving key benefits
- **Healthy Lifestyles and Health Inequalities** – differentials in the number of residents dying early as a consequence of key health problems is evident across the JCS area.
- **Transport Choices** – the need to encourage a move away from commuting by private car.
- **Education Deprivation** – inequalities both between and within urban areas.

4.0 Consideration of Plan-Making Options & Alternatives in SA

Introduction

- 4.1 SA of options emerging and developing in the plan-making process for the GCT JCS has been ongoing since early Joint Study Area (JSA) studies during 2004-6. In the light of the time that has passed and any confusion or uncertainty that may have arisen as a result of the changes in planning legislation and policy, this section of the SA Report sets out the history of the SA of alternatives and options assessment; it also serves to demonstrate compliance with the SEA Regulations, particularly in consideration of recent SEA case law. It summarises how options have been identified, assessed and progressed or rejected through different stages of plan-making; it summarises and refers to SAs that have been undertaken and outlines how the findings of these SAs have influenced different stages of the JCS. It also demonstrates that the reasons for selecting the preferred option and rejecting other alternatives are still valid. Further details of how spatial options have been investigated during the preparation and development of the JCS are provided in the Spatial Options Topic Paper (GCT, October 2013)⁶⁹.

Assessment of Alternatives in SA/SEA

- 4.2 The EU SEA Directive⁷⁰ requires assessment of the likely significant effects of implementing the plan and “reasonable alternatives” taking into account “the objectives and geographical scope” of the plan and the reasons for selecting alternatives should be outlined in the Report. The Directive does not specifically define the term “reasonable alternative”; however, UK SA/SEA guidance⁷¹ advises that it should be taken to mean “realistic and relevant” i.e. deliverable and within the timescale of the plan.
- 4.3 Extant SEA guidance⁷² sets out an approach and methods for developing and assessing alternatives. This includes acknowledgement of a hierarchy of alternatives that are relevant and proportionate to the tiering of plan-making. Alternatives considered at the early stages of plan-making need not be elaborated in too much detail so that the “big issues” are kept clear; only the main differences between alternatives need to be documented i.e. the assessment should be proportionate to the level and scope of decision-making for the plan preparation. The hierarchy of alternatives may be summarised in the following diagram:

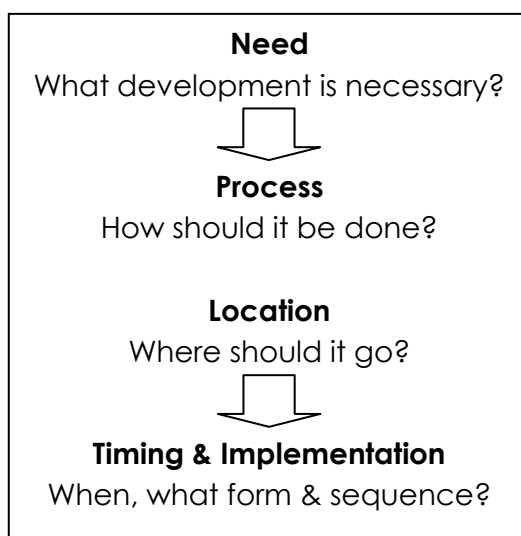
⁶⁹ <http://www.gct-ics.org/Documents/EvidenceBase/Spatial-Options-Topic-Paper-FinalPDF.pdf>

⁷⁰ <http://ec.europa.eu/environment/eia/sea-legalcontext.htm>

⁷¹ <https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance>

⁷² <http://www.pas.gov.uk/pas/core/page.do?pagelid=152450>

Figure 4.1: Hierarchy of Alternatives in SA/SEA and Options in Plan-Making



- 4.4 Recent case law in England has clarified and provided further guidance for current practice on how alternatives should be considered in SA/SEA of spatial and land use plans. The Forest Heath Judgment⁷³ confirmed that the reasons for selecting or rejecting alternatives should be explained, and that the public should have an effective opportunity to comment on appraisal of alternatives. The SA report accompanying the draft plan must refer to, summarise or repeat the reasons that had been given in earlier iterations of the plan and SA, and these must still be valid.
- 4.5 The Broadlands Judgment⁷⁴ drew upon the Forest Heath findings and further set out that, although not an explicit requirement in the EU SEA Directive, alternatives should be appraised to the same level as the preferred option; the final SA Report must outline the reasons why various alternatives previously considered are still not as good as the proposals now being put forward in the plan, and must summarise the reasons for rejecting any reasonable alternatives - and that those reasons are still valid. The Rochford Judgment⁷⁵ confirmed that the Council had adequately explained how it had carried out the comparative assessment of competing sites and that any shortcomings in the early process had been resolved by the publication of an SA Addendum Report.

Assessment of Options in Plan-Making

- 4.6 Development planning issues, such as how much, what kind of development and where, are considered within the requirements of legislation and policy together with the characteristics of the plan area and the views of its communities. Potential options for resolving such issues are identified by the Councils through various studies, such as population projections and housing need, community strategies, infrastructure capacities, and environmental

⁷³ Save Historic Newmarket Ltd v Forest Heath District Council (2011) EWHC 606

⁷⁴ Heard v Broadland District Council, South Norfolk District Council, Norwich City Council (2012) EWHC 344

⁷⁵ Cogent Land LLP v Rochford District Council (2012) EWHC 2542

constraints analysis – and through consultation with the regulators, the public, businesses, service providers, and the voluntary sector.

- 4.7 At the earlier and higher levels of strategic planning, options assessment is proportionate and may have a criteria-based approach and/or expert judgment; the focus is on the key differences between possibilities for scale, distribution and quality of development. At this early stage, the options presented may constitute a range of potential measures (which could variously and/or collectively constitute a policy) rather than a clear spatial expression of quantity and quality. Each option is not mutually exclusive and elements of each may be further developed into a preferred option. As a plan evolves, there may be further consideration of options that have developed by taking the preferred elements from earlier options. Thus the options for plan-making change and develop as responses from consultation are considered and further studies are undertaken.
- 4.8 At the later and lower levels of development planning for site allocations, options assessment tends to be more specific, often focused on criteria and thresholds, such as land availability, accessibility to services and impacts on local landscape, and particularly informed by technical studies such as the Strategic Housing Market Assessment (SHMA), the Strategic Housing Land Availability Assessment (SHLAA), and Strategic Flood Risk Assessment (SFRA). There is a hierarchy of options assessment with sites that are not viable or deliverable or might have adverse effects on protected environmental assets rejected at an early stage.
- 4.9 The role of the SA is to inform the Councils in their selection and assessment of options; SA is undertaken of those reasonable alternatives (options) identified through the plan-making process. The findings of the SA can help with refining and further developing these options in an iterative and ongoing way. The SA findings do not form the sole basis for decision making – this is informed also from planning and other studies, feasibility, and consultation feedback.
- 4.10 Various options for accommodating proposed growth in the Gloucester, Cheltenham and Tewkesbury local authority areas have been considered and variously subject to SA/SEA and consultation since early JSA studies to inform the emerging Regional Spatial Strategy for South West England (RSS-SW). Although there have been subsequent significant changes to the planning system, including revocation of the RSS and introduction of the NPPF, the findings from previous studies and consultation have informed the ongoing development of the JCS with new studies and updated evidence during 2008-2013 and 2014.

SA Findings and Reasons for Selecting or Rejecting Alternatives in the JCS

- 4.11 The JCS and SA/SEA stages, documents and consultation were set out previously in Table 1.1. Each stage of plan-making and SA was undertaken in the context of the legislation, policy and with the evidence available at the time. Section 5 of this SA Report outlines the early strategic studies carried out for the JSA of Gloucester and Cheltenham to inform RSS-SW preparation

during 2004-2006. It summarises the reasons for rejecting some options and progressing certain other options to take forward into the first stage of preparing a Joint Core Strategy – the Issues and Key Questions document in 2009. The responses to public consultation on this document informed the preparation of the next stage of plan-making.

- 4.12 Section 6 of this SA Report summarises the findings of the SA of the JCS Developing the Preferred Option 2010-2011. This includes consideration of options for the spatial strategy, scenarios for the quantum of development, and options for strategic allocations and broad locational areas of search for additional capacity. Reasons for selecting, progressing and/or rejecting options are outlined, together with an explanation of how these options have been taken forward using updated evidence into the preparation of the Draft JCS in 2013 and the Pre-Submission Draft JCS in 2014. This work formed an initial assessment of the Developing the Preferred Options document and was undertaken internally by Officers. This process led to the rejection of certain sites on either plan-making or Sustainability Appraisal grounds, with others carried forward for further consideration. Further information is provided in the later sections of this report.
- 4.13 Moving forward, the next stage of the process has been undertaken by Enfusion, drawing on previous work and updating with current available evidence. Section 7 of this SA Report presents the details of the SA in 2013 and includes consideration of options for the overall Development Distribution Strategy and options for potential Strategic Site Allocations. Site boundaries and strategic development size/type have been developed as a result of various studies, including the SA findings, and comments from consultation over the years of plan-making.
- 4.14 The draft JCS was developed into the Pre-Submission JCS taking into account of consultation representations and updated evidence. The changes and their significance with regard to the findings of the SA are set out in Section 8 of this SA Report. The Pre-Submission JCS was informed by additional studies investigating the objectively assessed need for housing (CCHPR Supplementary Note, March 2014) and considered six scenarios. The report concluded that whilst one scenario remains a reasonable central case, 2 other scenarios are credible alternative options. Accordingly, these 3 scenarios were subject to high level strategic SA and this is reported in Section 8 of this SA Report.

5.0 SA of JCS Issues & Key Questions (2009)

SA of Options for Spatial Strategy

- 5.1 Sub-regional studies were undertaken of the Joint Study Area (JSA) for Gloucester & Cheltenham – based mostly on a boundary correlating with the County boundary. These informed the Strategic Sustainability Appraisal (SSA) of the Regional Spatial Strategy (RSS) and the development of the draft RSS itself. The JSA Steering Group considered 4 scenarios and 2 options for public examination:

Scenario 1: Main focus on North of Gloucester
Scenario 2: Main focus on NW Cheltenham
Scenario 3: Main focus on central Green Belt area and Junction 11
Scenario 4: Dispersed smaller option included Green Belt and non Green Belt

Option 1: A combination of Scenarios 1 & 2
Option 2: A continuation of the Gloucestershire Structure Plan Third Alteration
Option 2A: Greater levels of development at Cirencester, Stroud, Tewkesbury and the Forest of Dean Towns of Cinderford, Coleford and Lydney
Option 2B: A new settlement
Option 2C: Dispersal of small scale developments to a wide range of market towns and smaller settlements throughout the County.

- 5.2 The 4 Scenarios were subject to public consultation through the JSA process (Jan-Feb 2005). At this stage, all the options involved development in the Green Belt and identified broad locations of search (not specific sites) where possibilities for development sites could be investigated further. After the consultation, a revised strategic approach was produced that excluded any development in the Green Belt. The 4 Scenarios and 2 Options were subject to public consultation through the RSS and its accompanying SSA in 2006.

- 5.3 The RSS SSA⁷⁶ reported in 2006 that the JSA Group had concluded that Option 1 (elements of Scenarios 1 and 2) would be the most suitable locations for future growth. The reasons for selecting Option 1 to be the preferred option for a strategic approach were reported as follows:

- Option 1 will provide an even spread of employment opportunities around Gloucester
- Option 1 is the performer in terms of congestion and the preferred location of the Highways Agency
- Option 2 will provide employment opportunities for Cheltenham
- Option 2 could deliver the North West relief road
- Scenario 1 overall will provide employment centres in the area and has a good potential to encourage public transport use

⁷⁶ <http://www.southwest-ra.gov.uk/media/SWRA/RSS%20Documents/Final%20Draft/ssamainreport1.pdf>

- 5.4 The emerging RSS in 2008 indicated requirements for the Gloucester and Cheltenham Housing Market Area as follows:
- 34,200 additional dwellings up to 2026 (11,500 in Gloucester, 8,100 in Cheltenham, 14,600 in Tewkesbury)
 - 5 possible Urban Extensions to provide up to 11,300 of total housing
 - 11,700 new jobs in Gloucester Travel to Work Area and additional 79 hectares of employment land; 10,700 new jobs in Cheltenham Travel to Work Area and additional 39 hectares of employment land
 - [Possible Urban Extension to south of Gloucester City, mostly in the District of Stroud, and to be addressed jointly with Stroud DC if progressed in the Final RSS]

JCS Issues & Key Questions

- 5.5 This document sought to generate debate to inform the preparation of JCS options to accommodate the development for the area proposed by the emerging RSS. It should be noted that the early stages of the JCS were set within the context of the emerging RSS. Since that time, the RSS has been formally and legally revoked and is no longer a consideration in the plan making process. Stakeholders and the public were invited to give their views at this early stage in preparing the JCS on the following:
- The key issues that need to be addressed
 - The vision for the area
 - The topics that the JCS should cover
 - What policies could be included and what the priorities should be
- 5.6 For each key policy area the issues and policy context were explained, the local issues identified and aligned with the proposed strategic objectives for the JCS; options or “things to consider” were suggested together with their likely outcomes for spatial areas and policy themes including potential sustainability impacts – each policy area was also correlated with SA Objectives and consultees were invited to consider the implications for sustainable development.
- 5.7 The spatial areas and policy themes were as follows:
- Gloucester City & Cheltenham Urban Areas
 - Tewkesbury Borough
 - Sustainable Urban Extensions: North of Gloucester; NW of Cheltenham; South of Cheltenham; North of Bishops Cleeve; Land North of Brockworth Infrastructure priorities through development
 - Urban regeneration & managing release of land
 - Topic Based Policy Areas – Affordable Housing; Sustainable Buildings; Renewable Energy; Flooding; Employment; City & Town Centres; Green Infrastructure; Gypsy & Traveller Provision
 - Potential Other Policy Areas – historic; AONB; Biodiversity & Habitats; Retail
Deliverability & Community Infrastructure Levy

- 5.8 After the public consultation, the three Councils undertook stakeholder consultations with Parish Councils and also carried out a further on-line consultation. The results of these consultation activities with lessons learnt, outcomes and reasons for progressing or not progressing potential approaches to development options are detailed in the JCS Response Report to Consultation (October 2011).

6.0 SA of Developing the JCS Preferred Option (2011)

SA of Spatial Options

- 6.1 During March – July 2010, the JCS considered 3 Spatial Options to deliver the development required by the emerging RSS. These Spatial Options were based on sustainability themes as follows:

- Addressing Climate Change (environmental)
- Economic resilience
- Stronger communities

Certain policy directions and a different spatial distribution for each of the 3 Options would be required in order to deliver the development requirement. The Spatial Strategy Options were subject to stakeholder consultation.

- 6.2 During the earlier consultation for JCS Strategic Options and JCS Part 1 draft strategic approach, the strategic option for greater resilience to climate change had also considered the possibility of a new settlement rather than peripheral development around the larger urban areas. It was determined that the level of infrastructure required to support a new settlement would be so significant that it was not a viable option. Under the stronger communities strategic approach, consideration was given to greater dispersal to the rural settlements. It was also determined that this was not a viable option, particularly with regard to quantum of development with adverse effects on infrastructure and sustainability factors such as transport and provision of local services in the rural areas. Since these two options were not considered to be reasonable alternatives, they were not subject to SA at this time.
- 6.3 SA, incorporating SEA, was undertaken of these 3 Spatial Options in January 2011 using strategic level compatibility analysis with the SA framework of objectives. Summary findings were reported (para 3.23 and Table 7 page 16) in the Initial SA Report (December 2011), together with advantages and disadvantages set out in Table 6 (pages 14-15). The details of the comparative compatibility SA were reported in three matrices in the appendices using a summary key (compatible, conflict, neutral, no relationship, further information required) with commentary. This Initial SA Report accompanied the publication of the Developing the Preferred Option document and was subject to public consultation in December 2011.
- 6.4 The SA acknowledged that uncertainty was associated with the likely effects from the high level strategic nature of the 3 Spatial Options and that further information was required in order to enable appraisal for most of the SA objectives. However, the SA did provide indications for the likely positive effects and suggest how elements of the options could be made more sustainable, for example, through the provision of development management policies that require sustainable construction standards, by suggesting opportunities for walking and cycling to promote more sustainable movement, and by proposing a certain level of affordable housing within residential developments.

- 6.5 The findings of the SA, together with other studies and responses from the consultation activities, contributed to the development of the proposed preferred approach to the spatial strategy for the JCS. This focused on Option 2 based on economic resilience and included elements from the other two options to reflect the importance of socio-environmental factors in sustainable development. The reasons for selection or rejection are outlined in the table as follows:

Table 6.1: Options for Spatial Strategy (2011) Reasons for Selection/Rejection

2008-2010 Spatial Strategy stakeholder consultation (May-July 2010); public consultation December 2011	
Option 1: Spatial Strategy based on Achieving Stronger Communities	Rejected as the emphasis on delivery of affordable housing & community facilities may affect viability and redirect investment from other equally important infrastructure needs. Less likely to create opportunities for all.
Option 2: Spatial Strategy based on Achieving Economic Resilience	Progressed (together with elements of options 1 & 3) since it provides the greatest opportunity to improve the wealth & prosperity of residents. Concentrating development in urban centres reduces negative effects on the wider environment. Success of option is reliant on delivery of timely infrastructure.
Option 3: Spatial Strategy based on Addressing Climate Change	Rejected as major adverse effects on landscape and biodiversity from fewer larger sites and a single new settlement.

- 6.6 A draft strategic approach for the JCS Part 1 was developed and included a Spatial Portrait; Issues; Vision; and Strategic Objectives. Thus the preferred approach to the spatial strategy presented was to focus development within and on the edge of existing urban areas rather than distributing more development across the rural areas. This was subject to an informal on-line public consultation through the Councils' JCS website June-August 2010. A compatibility analysis of the JCS strategic objectives and the SA objectives was reported in the Initial SA Report (Section 3), December 2011.

SA of JCS Strategic Objectives

- 6.7 As a result of the Issues & Key Questions consultation document (December 2011), the draft Strategic Objectives were revised and subject to compatibility SA at this stage; the findings of the SA are presented in Table 4 (page 11) of the Initial SA Report. The majority of the Strategic Objectives (SOs) for the JCS were found to be compatible with the SA indicators. However, a number of SOs were found to be in conflict with SA indicators, including Housing, Skills & Education, Flooding, Natural Environment, Climate Change, and Culture,

Leisure & Tourism. Conflicts were found with positives for social progress but adverse effects on environmental factors.

- 6.8 The SOs were revised again to take account of the SA findings and the responses from the public consultation. These revised SOs were subject to SA again and the findings reported in Table 5 (page 12) of the Initial SA Report. Overall, the Strategic Objectives were compatible with the SA objectives; some conflict remained for Improving the Natural Environment, Economic Growth, & Local Housing Need. As a result of this compatibility SA, some further amendments were made to the Strategic Objectives and taken forward into the Developing the Preferred Option document.

SA of Scenarios A-D: Proposed Strategic Allocations & Broad Locations

- 6.9 In order to progress the housing and employment requirements based on locally derived information and updated evidence, the JCS Councils undertook various studies and identified a need for 36,850 new homes and 20,000-35,000 new jobs in the plan period to 2031. In consideration of consultation concerns regarding the level of housing growth and its implications for Greenfield sites and existing communities, the Councils identified 4 options (Scenarios A-D) for housing numbers for further consultation. These housing need options are summarised in the following table:

Table 6.2: Scenarios A-D Housing Numbers

Scenario	Total Homes	Description
A	16,200	Urban capacity, extant commitments, 2,400 new homes in wider rural areas of Tewkesbury Borough. This scenario was not based on housing need but urban capacity and a rural allowance..
B	33,200	Less 10% current local projection of housing need
C	36,850	Current local projection of housing need
D	40,500	Plus 10% current local projection of housing need

- 6.10 Taking the preferred strategic approach of an urban focus, further studies determined how much development could be accommodated within the existing capacity of the urban areas (13,800 over the plan period to 2031). This then identified what level of development was needed to be found on the edges of each of urban area. An assessment of constraints and opportunities was undertaken to identify the most appropriate potential locations for development on the urban edges.
- 6.11 Twenty one broad directions or segments around the 3 main centres within the JCS area were identified as "Broad Locations" and assessed for constraints and suitability for strategic levels of development. The Cotswolds Area of Outstanding Natural Beauty (AONB) was excluded from this assessment as it was not considered to be an appropriate area within which

to consider strategic levels of development. Nine Broad Locations (G1-G9) around the Gloucester urban edge, six Broad Locations (C1-C6) around Cheltenham urban, and six Broad Locations (T1-T6) around Tewkesbury were assessed and the findings of this work are set out in the JCS Broad Locations Report. All 21 Broad Locations were also assessed by Officers using the SA Framework of objectives and decision-aiding questions for sustainable development. An additional SA factor was included to consider the deliverability of the site and other strategic spatial options. A commentary was provided with symbols (green, amber, red) representing likely significant positive and negative effects; amber indicated uncertainty with the potential for mitigating any negative effects, and the need for more information was also recorded.

- 6.12 The findings of this initial SA helped to inform the decision-making on which locational areas to progress within the Developing the Preferred Option document. The details of the SA of the Broad Locations are set out in Appendix 4 to the Initial SA Report (2011); summary findings are provided in Table 8 (pages 19-26) of the main SA Report. The Initial SA Report 2011 is referenced as Appendix III to this SA Report and is available separately through the JCS website at <http://www.gct-jcs.org/SustainabilityAppraisal/>.
- 6.13 The principal environmental constraints for the Broad Locations included the AONB and risk of flooding, which together with the Green Belt indicated a limited number of development possibilities. The summary findings of the SA and the reasons for progressing these Broad Locations options as potential Strategic Allocations are set out in the following table:

Table 6.3: Broad Locations – Summary SA Findings & Reasons for Selection or Progression to Consideration at Preferred Option in Plan-Making

Gloucester	
Broad Location G1 Land North of Gloucester (283.35 ha) <i>Progressed as JCS Proposed Strategic Allocation: Innsworth (3,100 homes)</i>	<p>Positive effects for most SA Objectives with potential for very positive effects on biodiversity since opportunities to improve natural habitats. Initial studies suggest landscape sensitivity is low such that it could be replaced or substituted. The area is well related to the Gloucester urban area and Gloucester City Centre such that key facilities and services would be readily accessible.</p> <p>Potential negative effects for flood risk and resources (since almost 50% of the area is Grade 1 agricultural land). The SA suggested reducing the development area to the south would avoid the main flood risk area and thus improve the sustainability and recommended that a smaller location area of G1 should be taken forward for further consideration (p8 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed for further consideration as the area had less environmental impacts than other broad locations; it is well</i></p>

<p>Broad Location G2 Land North/North East of Gloucester (651 ha)</p> <p><i>Part considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes.</i></p>	<p><i>connected and with opportunities to enhance biodiversity.</i></p> <p>SA found positive effects in relation to flood risk and use of natural resources (as predominantly non-agricultural), minor positive for landscape, with varying sensitivity, and biodiversity as this is a large site with varying habitat but mostly mown grassland of the airport or the golf course. Area most suitable for employment uses related to aerospace engineering given the proximity of the airfield.</p> <p>Accessibility issues to the south and east with the M5 and A40; some capacity problems, although possibilities for mitigation if the area is developed with others such as C5 and G1. Negative effects on the visual gap between the two settlements of Gloucester and Cheltenham. Negative effects have identified for landscape as there is value for retaining the Location as a green corridor to prevent visual coalescence of Cheltenham and Gloucester. Also the site is not considered to be appropriate for residential development due to poor linkages to any existing communities.</p> <p>SA suggested that this Broad location could be suitable for some aerospace/ high technology engineering sector building on the cluster of employment sites currently at this location which would support the airfield (p16 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed for further consideration as the area includes a cluster of employment sites around the airport.</i></p>
<p>Broad Location G3 Land North East of Gloucester (466.85 ha)</p> <p><i>Part considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes.</i></p>	<p>Positive effects for most SA Objectives in particular as it offers good opportunities for transport improvements to the A40 and economic development. Also there are opportunities to enhance biodiversity given the presence of a Key Wildlife Site and BAP priority habitats.</p> <p>Significant negative effects were identified for over half of the Broad Location (between the railway line and the M5) as this part is designated as a Special Landscape Area. The landscape sensitivity was also considered to be high for the majority of the Location and part of a wider green corridor creating a visual gap between the two large urban areas. Loss of publically accessible greenspace at Churchdown hill was also an issue.</p> <p>The SA suggested that this broad location would not be considered suitable for large scale housing, but part of the area could be taken forward for consideration for some employment land use (p19 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed for further consideration as offers good</i></p>

	<i>opportunities for employment land.</i>
<p>Broad Location G4 Land East of Gloucester (81.06 ha)</p> <p><i>Progressed as a JCS Proposed Strategic Allocation: Brockworth (1,500 homes)</i></p>	<p>Positive effects were identified for the SA objectives for city and town centres, sustainable communities, education, transport given its close proximity to Gloucester City.</p> <p>The SA found significant negative effects for the historic environment as a result of a number of listed buildings in the centre of the Broad Location search area.</p> <p>The SA suggested that the westernmost parcel of land would be more appropriate for industrial use with the potential for residential development to the east. The results of the initial SA Appraisal suggested that the site should be taken forward for further consideration as part of the JCS site search (p19& Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed for further consideration as well connected with good sustainable transport; low significance re Green Belt compared to other areas of search.</i></p>
<p>Broad Location G5 Land East of Gloucester at Brockworth (230.18 ha)</p>	<p>Positive effects were identified for the majority of SA objectives apart from biodiversity and greenspace due to the presence of a Key Wildlife Site close by and BAP priority habitats.</p> <p>It was recommended by the SA that this location should be removed from the broad location search (p19). The majority of the area had already been allocated for development, part of the broad location falls within Stroud and is considered to be less suitable for further development owing to poor highway infrastructure to that part of the site and nature conservation constraints (p38 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Not progressed for further consideration as the site is now subject to planning consent for employment and housing purposes. Allocated in Tewkesbury Borough Local Plan since the early 1990's.</i></p>
<p>Broad Location G6 Land to the South of Gloucester at Brookthorpe with Whaddon (483.15 ha)</p>	<p>The location was identified as not being supportive of many of the SA objectives. Major negative effects were identified for a number of SA Objectives including natural resources, transport, economy and city and town centres. It was felt that the distance from the city centre would lead to limited access to facilities and that transport infrastructure both public and private was considered to be poor.</p> <p>Positive effects were identified for flooding and waste and pollution as the Location is not within a medium or high risk flood zone, nor is it in or close to an area with reduced air quality. There could be opportunities to enhance biodiversity value.</p>

	<i>Not progressed further as outside the JCS area.</i>
Broad Location G7 Land to the South of Gloucester at Hardwicke (185.53 ha) 	<p>The Initial SA findings were similar to those identified for G6. Negative effects were identified for, , biodiversity), transport infrastructure, and access to key services and facilities;-and landscape as development could lead to urban sprawl.-And self-containment and urban sprawl.</p> <p>Positive effects identified for the economy and economic objectives as there are existing employment opportunities nearby and the location has good access to the M5 although it was identified that further development in this area could exacerbate problems on M5 junction 12,</p> <p><i>Not progressed further as outside the JCS area.</i></p>
Broad Location G8 Land to the West of Gloucester at Highnam (608.16 ha) <i>Considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes</i>	<p>Negative effects identified for all SA objectives and in particular with regard to: natural resources and loss of high grade agricultural land; the location's relative remoteness and rural nature; and accessibility to services and facilities which could give rise to an increase in private car use leading to further congestion.</p> <p>The SA suggested that large scale development here could overwhelm the existing settlement of Highnam.</p>
Broad Location G9 Land to the South of Churchdown (49.66 ha) <i>Considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes</i> <i>Progressed as JCS Strategic Allocation: Churchdown (750 homes)</i>	<p>Many positive effects were identified by the SA for this broad location as the area is the closest to the centre of Gloucester and is surrounded by existing urban development.</p> <p>A key negative effect from the SA was identified in terms of landscape as development could lead to the loss of an important greenspace in the greenbelt which provides separation between Innsworth and Churchdown with Gloucester. It was suggested that if a site could be developed without encroaching on the designated important greenspace and masterplanned to retain some green and visual divide between the settlements it could be one of the most sustainable locations (p20).</p> <p><i>Progressed for further consideration as one of the most sustainable areas.</i></p>

Cheltenham	
<p>Broad Location C1 Land to the West and North of Bishops Cleeve (344.53 ha)</p> <p><i>Considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes</i></p>	<p>The SA found negative effects for transport, education, health and town and city centres as the location is not peripheral to Cheltenham and its distance from the main urban area is likely to increase travel by car. In addition, access to services is limited and further development in this area could lead to urban sprawl.</p> <p>Positive effects were identified for biodiversity as its value was considered to be poor compared to most other locations. There were no issues with flooding or waste and pollution. It was recommended by the SA that this broad location should be removed from the JSC Broad Location search (p21 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Not progressed for further consideration due to distance from main urban area and accessibility issues.</i></p> <p><i>NOTE: 1,000 homes were allowed on appeal at this location following the consultation on 'Developing the Preferred Option'.</i></p>
<p>Broad Location C2 Land between Cheltenham & Bishops Cleeve (904.59 ha)</p> <p><i>Part considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes</i></p>	<p>The SA found key negative effects with regard to town centres for sub-areas C2e and C2b. In addition, biodiversity and landscape were identified as being key negative effects for C2e, C2b and C2a. Flooding was identified as a constraint for C2d but development of the southern part could avoid this issue.</p> <p>The sub-areas that were considered to be most sustainable (C2c and C2d) were located in close proximity to Cheltenham, were of low biodiversity value and their landscape sensitivity was considered to be low.</p> <p>The SA recommended that sub-areas: C2a - Land between the GW Railway and the AONB; and C2b - Land between the GW Railway and the A435 (pp21), be removed from the JCS Broad Location search.</p> <p>It was recommended that sub-areas: C2c - Land to the West of Cheltenham Racecourse; and the most southern part of C2d - Land between the mainline railway and the A435, be retained in the JCS Broad Location search and undergo more detailed SA (p21).</p> <p>Sub-area C2e was considered to be one of the least sustainable locations and should be removed from the JCS Broad Location Search (p88 & Appendix 4 JCS Broad Locations SA).</p>

	<i>Progressed in small part for further consideration as potential for good accessibility and low-lying such that visual impacts reduced.</i>
Broad Location C3 Land to the North West of Cheltenham (827.59 ha) <i>Progressed as JCS Strategic Allocation: North West Cheltenham (4,450 homes)</i>	<p>For this large broad locational area, the northern part was considered to be not well located or easily accessible by the SA which would lead to negative effects on health, transport and city and town centres. The Location is also split by several water courses and associated areas of flood risk.</p> <p>Positive effects on SA Objectives were identified for biodiversity, waste and pollution and greenspace. This was due to: the lack of biodiversity assets; the lack of any known pollution present; and opportunities for greenspace enhancement with regard to the River Chelt and providing greater access to allotments, sports grounds and recreation facilities.</p> <p>Parts of the location such as Uckington and Swindon were considered to support the majority of SA objectives. Although these areas are in the greenbelt, the Greenbelt Review Paper, cited in the SA, considered that these two areas performed no separation role between the urban areas.</p> <p>It was recommended that parts of this area (Uckington and Swindon to the South East) could be taken forward in the JCS process for a more in depth SA (p22 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed in part due to lower sensitivity of Green Belt for further consideration.</i></p>
Broad Location C4 Land at a distance to the West of Cheltenham including Boddington (540.23 ha)	<p>Not subject to SA. This broad location was discounted as it is not close to any of the main urban centres and it is separated to the east from Cheltenham by the M5 (p22); isolated and therefore not considered to be a realistic alternative.</p>
Broad Location C5 Land to the West of Cheltenham (578.68 ha) <i>Considered as a potential Broad Location to accommodate shortfall in development between 2021 &</i>	<p>Negative effects were identified for all of the Broad Locational search area as a result of Greenbelt designation and also for the northern part only in terms of flooding. Also the central area contains the Hayden Sewage Works and as a result it was suggested that only some high tech industrial use would be allowed.</p> <p>Positive effects were found for accessibility, transport and employment opportunities, in particular for the south and eastern parts of the Location.</p> <p>The SA recommended that the southern and eastern parts of this broad location are taken forward in the JCS process</p>

2031 under the three themes	(p22). <i>Progressed in part for further consideration because good accessibility and transport.</i>
Broad Location C6 Land to the South of Cheltenham (1208.38 ha) <i>Progressed as JCS Strategic Allocation: South Cheltenham (1,300 homes)</i> <i>Part considered as potential broad location to accommodate shortfall in development between 2021 & 2031</i>	<p>All parts of the location were considered to have a negative impact on biodiversity as the Location is considered important for biodiversity value and also for landscape given its proximity to the AONB. Negative effects on transport and town and city centres were identified for the central and southern parts of the Broad Location.</p> <p>Positive effects were identified for Leckhampton and other northern and eastern parts in terms of their close proximity to Cheltenham and services and facilities. The transport infrastructure in these areas is also considered to be good. Furthermore flooding is not a constraint.</p> <p>The SA recommended that the Broad Location area should be reduced in size and three segments should be taken forward: segment of land near the Reddings defined as land between the A40 to the North, Badgeworth Lane to the West and the rail line to the South; segment of land South-east of the railway line around Up Hatherley on either side of Sunnyfield Lane between Coldpool Lane and Chargrove Lane; and land to the South-west of Leckhampton bounded to the North-west by the A46 Shurdington Road, to the West by Farm Lane, the North by Church Road and to the East by the public greenspace and the allotments.</p> <p><i>Progressed 3 parts because well associated with Cheltenham; most of these areas are outside the Green Belt; good extension to south, balancing extension to the north; & no major constraints.</i></p>

Tewkesbury	
Broad Location T1 Land at Mitton (in Wychavon District) (272.36 ha)	<p>The majority of sub-area T1a supports many of the SA objectives although there are potential negative effects identified in terms of transport (congestion and public transport); historic environment (high potential for archaeology); and flooding. The southern part is considered to be reasonable well located to Tewkesbury Town with reasonable access to services, facilities and employment development.</p> <p>Development at sub-areas T1b and T1c would not support the SA Objectives of biodiversity and city and town centres as they would both result in the loss of a SSSI and are considered to be remote from Tewkesbury. Negative effects on flooding and landscape were also identified for T1b.</p>

	<p>The SA recommended that most of this Broad Location be discounted from the JCS search, due to biodiversity, landscape and flooding constraints and accessibility issues.</p> <p>However, in view of the proximity of the southern extent of part of sub area T1 (T1a) to Tewkesbury Town, the SA recommended that T1a should be taken forward for further appraisal. Sub-area T1b was recommended by the SA to be discounted as a Broad Location and further investigation as it did not perform well in the SA (pp24). The SA recommended that sub-area T1c should be discounted as a Broad Location (p130 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Not progressed further as outside the JCS area.</i></p>
<p>Broad Location T2 Land to the East of Ashchurch (198.52 ha)</p> <p><i>Progressed as JCS Strategic Allocation: Ashchurch (2,100 homes)</i></p>	<p>The SA identified positive effects for both sub-areas (T2a and b) with regards to health, education, city and town centres and transport.</p> <p>Negative effects were identified for the northern part of sub-area T2b with regard to biodiversity, flooding and historic environment (potential for archeology).</p> <p><i>The SA recommended that both sub-areas T2a and b should be taken forward for further consideration (p24 & Appendix 4 JCS Broad Locations SA).</i></p>
<p>Broad Location T3 Land South of Ashchurch including Fiddington (238.30 ha)</p> <p><i>Part considered as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 under the three themes</i></p>	<p>Negative effects were identified for both sub-areas (T3a and b) with regard to flooding, access and transport. T3a was identified as potentially leading to negative effects on waste and pollution given its proximity to the M5.</p> <p>Positive effects were identified for biodiversity, economy and in part for natural resources given that there are no landscape designations.</p> <p>The SA recommended that T3 (including all sub-areas) be rejected from further JCS considerations (p146 Appendix 4 JCS Broad Locations SA).</p> <p><i>Progressed in part as small employment area because close to M5 with good access.</i></p>
<p>Broad Location T4 Land to the South East of Tewkesbury including Walton Cardiff (224 ha)</p>	<p>For all of the sub-areas the following key negative effects were identified by the SA: flooding; biodiversity; and education (access to secondary school facilities). Sub-areas T4c and d also were identified as having the potential for major negative effects on economy and transport.</p> <p>Positive effects were identified for all sub-areas with regard to waste and pollution. Sub-areas T4a and b were considered to</p>

	<p>support the SA objectives of transport given their proximity to main roads and to the Town centre.</p> <p>The SA recommended that T4 (including all sub-areas) be rejected from further JCS considerations.</p> <p><i>Not progressed due to high flooding risk.</i></p>
<p>Broad Location T5 Land to the South West of Tewksbury (161.19 ha)</p>	<p>All sub-areas in T5 are considered to lead to significant negative effects on the SA Objective of natural resources given they are all located in a Landscape Protection Zone and on historic environment due to the presence of a historic battlefield on both sub-areas. Sub-area T5b was also indentified as leading to negative effects on flooding.</p> <p>Positive effects were indentified for both sub-areas with regard to transport and city and town centres given their close proximity to Tewkesbury and in particular for Sub-area T5b given its good access to public transport. Sub-area T5a was identified as having the potential to enhance biodiversity and thus having positive effects on the biodiversity SA Objective.</p> <p>The SA recommended that sub-area T5a should be rejected from further JCS considerations but the eastern section of sub-area T5b should be considered further (p26 & Appendix 4 JCS Broad Locations SA).</p> <p><i>Not progressed due to adverse effects on landscape and historic environment.</i></p>
<p>Broad Location T6 Land to the North of Tewksbury (307.52 ha)</p>	<p>All sub-areas in T6 were considered to lead to significant negative effects on the SA Objective of flooding. Sub-area T6a is located with a Landscape Protection Area and Sub-area T6b is located in a Landscape Conservation Area and therefore development here was considered also to lead to significant negative effects on the SA Objective of natural resources. Negative effects were also identified for all Sub-areas with regard to the SA objectives of transport and education. Positive effects were identified for waste and pollution for all Sub-areas.</p> <p>The SA recommended that T6 (including all sub-areas) should be rejected from further JCS considerations. Sub-areas T6c and d are located within the administrative area for Malvern Hills District council.</p> <p><i>Not progressed, primarily due to adverse effects on landscape and high flooding risk</i></p>

6.14 The Initial SA of the Broad Locations was fundamental in helping to identify the most sustainable locations with least sensitivity to development around the three urban areas. The SA found that the areas G1, G2, G3, G9, C2 (in

part), C3, C5 (in part), C6 (in part) and T2 were the most sustainable. Broad Location G5 was also found to be reasonably sustainable but most of the area had already been allocated for development.

- 6.15 Six proposed Broad Locations were identified that could contribute towards the provision of 29,500 homes during Phase 1 of the plan 2011-2021 and were taken forward from the Broad Locations G1, G4, G9, C3, C6 and T2. These sites, along with urban capacity and existing commitments, would be able to deliver new homes and employment in the first phase of the plan period but would not be sufficient to deliver the full requirement for housing scenarios B, C and D. The following table shows the additional homes to be identified from other Broad Locations.

Table 6.4: Scenarios A-D Housing Numbers Strategic Allocations & Broad Locations

Scenario	Total Homes	Homes from Existing Capacity & Commitments (16,200) plus Proposed Strategic Allocations (Broad Locations G1, G4, G9, C3, C6 and T2) Phase 1 JCS	Additional Homes Required for Phase 2 JCS
A	16,200	16,200	
B	33,200	29,500	3,700
C	36,850	29,500	7,400
D	40,500	29,500	11,000

- 6.16 Scenario A did not include any of the proposed strategic allocations, but was based on an assessment of urban capacity, existing commitments and a rural allowance. The Councils set out scenarios B, C and D to include the 6 Strategic Allocations and the possibilities for other strategic sites from the Broad Locations to meet the additional housing requirements during Phase 2 of the plan period (2021-2031). Maps and descriptions were provided in the Developing the Preferred Option document for public consultation in 2011.
- 6.17 The 4 scenarios A-D were subject to assessment by considering whether each could deliver the ten JCS Strategic Objectives; this was particularly informed by findings of SA. These Strategic Objectives had been appraised using the SA Framework and refined to improve their compatibility with sustainable development SA objectives. Three categories of assessment were used against the JCS Strategic Objectives – yes (green), no (red) and maybe (amber). It was clear that Scenario A could not deliver the majority of the Objectives for the plan. Scenarios B, C and D were found to be a mix of amber and green (Developing the Preferred Option Document, pages 35-49, 2011).
- 6.18 An initial SA of each of the scenarios was undertaken; details are presented in Appendix 5 with summary information in the main text (section 3.4, pages 27-29) of the Initial SA Report (2011). The SA used the SA Framework of SA

Objectives and decision-aiding questions with professional judgment and evidence available at the time. The SA specifically considered both short, long term effects as well as cumulative (in-combination effects as regards HRA and effects on internationally protected biodiversity). Three categories of significance were recognised – red (negative), green (positive) and amber (uncertain, negative but possibilities for mitigation).

- 6.19 The SA made recommendations and suggestions regarding which Broad Locations (and parts thereof) would be more sustainable to meet with the shortfall of housing required for Phase 2 of the plan. It also suggested where more detailed studies of the Broad Locations might be needed to provide more information and reduce any uncertainties. The summary findings of the SA are set out in the following table:

Table 6.5: Scenarios A-D Summary SA Findings

Scenario	Summary SA Findings
Scenario A 16,200 homes	Most environmentally sustainable option due to limited quantum of development proposed, mostly focused on the urban areas. However, potential negative effects on transport, air quality, emissions & climate change due to increase in car-based commuting in the longer term to access employment and homes. Potential for loss of some biodiversity from brownfield land and through increased pressure on existing green corridors & green spaces due to urban intensification; some mitigation may be possible. Major negative effects for housing, especially affordable, provision, and economic growth, including loss of skills; inability to meet with employment land needs; limited investment with potential for declining services.
Scenario B 29,500 plus 3,700 homes	Medium environmental sustainability due to moderate level of development; positive/neutral effects for biodiversity and green space as the level of development could be accommodated without adverse effects; most likely also to be able to provide some enhancement. Key negative effects for increasing long distance car commuting both into and out of the JCS area; and inability to achieve affordable housing needs; limited investment with potential for declining services – particular issue for healthcare facilities identified. In common with Scenarios C & D, may be lag in development of employment land & further inward investment is subject to short delay.
Scenario C 29,500 plus 7,400 homes	Moderate environmental sensitivity due to the higher level of development; major positive effects for housing, including affordable; and SA objectives for social sustainability and communities – level of development proposed likely to support existing services and secure new services when required, including enhanced healthcare facilities.

	Some loss of local biodiversity; neutral for water/flood risk as level of development could be accommodated in areas not subject to flooding.
Scenario D 29,500 plus 11,000 homes	Lower environmental sustainability due to higher level of development proposed; major positive effects for housing, including affordable; and SA objectives for social sustainability and communities – as for Scenario C. More loss of local biodiversity (particularly from G1 and T2) than Scenario C; and increased negative landscape effects. Most development could still be accommodated on land not subject to flooding but level of development could make implementation of sustainable drainage systems more problematic.

- 6.20 Overall, the SA found that Scenario C was the most sustainable of the 4 scenarios; A was the most environmentally sustainable but could not deliver socio-economic objectives, and D was the most socially sustainable scenario through provision of housing, especially affordable, and employment with services and facilities to meet a range of needs, but had the most negative effects on environmental factors (pages 28 -29 Initial SA Report 2011). The SA acknowledged that some mitigation for potential negative effects could be provided by the precise wording in the Development Management Policies (para 3.46) to be further developed at a later stage of plan-making.
- 6.21 The SA further acknowledged that more detailed work was needed on the Broad Location options in order to identify the most sustainable areas that might provide the land for the development shortfall indicated. The SA recommended further studies and progression of Broad Locations G3 (but sensitive to landscape), the southernmost areas (c & d) of C2; C5; and T2 (but sensitive to landscape considerations to the north of the site).

SA of Phase 2 Options for Distributing Additional Development

- 6.22 The overall strategic approach to distributing development had been investigated through consideration of 3 spatial options (see earlier in this section 6). Studies, including SA, together with consultation responses, indicated that the preferred approach was for an urban focus and this guided the development of the proposed 6 Strategic Allocations to be instigated in Phase 1 of the plan period. Three further options were considered with regard to the distribution of the Broad Locations that would be needed to meet the additional housing and employment requirements suggested in Scenarios B, C and D. These options were presented for public consultation in 2011:
- Maximising economic opportunities
 - Preventing the coalescence of Gloucester & Cheltenham and Cheltenham & Bishops Cleeve
 - Making the best use of existing infrastructure

- 6.23 The 3 options, based upon the Broad Locations that had been targeted as the most likely to progress sustainable development, were subject to an initial SA using the SA Framework of objectives. A compatibility analysis was carried out using 4 categories of effects assessment – positive, negative, not significant, and needing further strategy development to enable assessment – represented by symbols +, 0, -, ?. This initial SA is summarised in section 3.5 and Table 9 (page 31) of the Initial SA Report (2011).
- 6.24 The SA found that Options 1 and 3 are broadly equal in sustainability terms. Option 2 is less sustainable than 1 & 3 primarily due to the inclusion of Broad Location G8 with significant levels of Grade 1 agricultural land and the northern sector of Broad Location T3 which is liable to flooding. Option 2 also has negative effects with regard to poor public transport accessibility and the potential negative effects on Cheltenham town centre of directing further development to Broad Location C1.

7.0 SA of the Draft Joint Core Strategy (2013)

Introduction

- 7.1 Over 3000 responses received to the Developing the Preferred Option (DPO) document public consultation (13 December 2011 to 12 February 2013) were collated and reviewed. A summary of the responses and the key points raised were highlighted and are available on the JCS website⁷⁷. As a result of these responses, the implementation of the NPPF, and further studies to update the evidence base, the Preferred Option was further developed and subject to SA during 2013.
- 7.2 In 2012 Enfusion, as independent SA specialists were appointed to continue with the SA and HRA studies. In consideration of recent SEA case law, the changes in the planning system, the updated evidence base, and the time that had passed since the DPO and earlier documents, it was agreed to revisit the SA. Accordingly, 3 potential approaches to a strategy for distributing the locally-derived development need were subject to SA. A summary of the findings is set out later in this Section 7 of the SA Report and details are provided in Appendix VII (SA of Distribution Strategy). This confirmed that the most sustainable approach that would meet with the Strategic Objectives of the JCS was an urban focus for development, based on urban extensions.
- 7.3 Having confirmed that the urban focus was still the most suitable strategic approach, the Councils investigated the Broad Location areas in further detail. They took into account new and updated evidence and the responses from the public consultation, in order to identify potential strategic areas that could help provide the housing and employment land need identified⁷⁸. Broad Locational areas were evaluated further by considering 1 or more options within each area as possibilities for strategic development land allocations. Each option was subject to SA: summary findings are set out below and details are provided in this SA Report in Appendix IX (SA of Strategic Allocations).
- 7.4 Spatial and strategic Development Management Policies were developed to guide implementation of development according to the overall vision and objectives of the JCS. Emerging drafts of the policies were subject to SA: summary findings are set out below and details are provided in this SA Report in Appendix VIII (SA of Spatial & Development Management Policies).
- 7.5 The appraisal used the SA Framework of objectives and decision-aiding questions previously established during the scoping process (and see section 2 earlier). The baseline information and the plans/programmes review were reviewed and updated – presented here in this SA Report as Appendix IV (Baseline and PP Review Updates 2013). The emerging strategic allocations

⁷⁷ <http://www.gct-jcs.org/PublicConsultation/JointCoreStrategyDevelopingthePreferredOptionpublicconsultationDecember2011toFebruary2012.aspx>

⁷⁸ Cambridge Centre for Housing and Planning (2013) Objectively Assessed Need Range of 33,200-37,400. Online at <http://www.gct-jcs.org/> [Accessed July 2013]

and policies at this later stage of plan-making reflect the findings of previous SA, other studies including constraints/opportunities analysis, and the views of regulators, stakeholders and the public. Therefore, major negative effects and suggestions for avoidance/mitigation from the SA would not be anticipated as these have already been taken into account. The findings of the SA are summarised below and include any further suggestions or recommendations made from the SA to improve the sustainability of the JCS.

Vision & Strategic Objectives

- 7.6 The strategic **Vision for the JCS** area proposed in the DPO document in 2011 has been developed, expanded and made more specific in its outcomes as follows:

JCS Vision 2013

By 2031 Tewkesbury Borough, Cheltenham Borough and Gloucester City will have continued to develop as **highly attractive and highly accessible places** in which to live, work and socialize.

The Joint Core Strategy area will be recognized nationally as enjoying a **vibrant, competitive economy** with increased job opportunities and a strong reputation for being an attractive place in which to invest.

The **character and identity of individual communities** will have been retained while *improved access to housing* will have addressed the needs of young families, single people and the elderly
New developments will have been built to the **highest possible standards of design** and focused protecting the quality and distinctiveness of each community.

Established in **sustainable locations**, without increasing the risk of flooding, new development will have been designed with sensitivity towards existing villages, towns and cities and with **respect for the natural environment**.

As a result of a strong commitment to the housing and employment needs of the existing and growing population, all residents and businesses will benefit from the **improved infrastructure**, which will include roads, public transport and services, and community facilities.

- 7.7 A compatibility analysis of the GCT JCS Vision was carried out using the SA framework in Jul/Aug 2013. The details of compatibility analysis of the revised Vision are provided in this SA Report in Appendix VI. The changes to the JCS Vision since 2011 make clearer the positive progression for SA objectives.
- 7.8 These “*Highly attractive and accessible places in which to live, work and socialise*” progresses major positive effects for SA objectives on sustainable transport, housing, human health, and green space. A “*vibrant, competitive economy with increased job opportunities and a strong reputation for being*

an attractive place to invest" will have major positive effects on SA objectives for the economy.

- 7.9 *"Retaining the identity of individual communities"* will have positive effects on SA objectives for sustainable communities and health. *"Improved access to housing"* will have positive effects on SA objectives for housing, sustainable communities and health. A requirement for new developments to be built to the *"highest possible standards of design"* will have positive effects on SA objectives for landscape/townscape and the historic environment, minimising adverse effects on settings, and will be positive for climate change and energy efficiencies.
- 7.10 Requiring new developments to be established in *"sustainable locations"* indicates positive effects for SA objectives for sustainable transport. *"Without increasing risk of flooding"* will progress SA objectives for flooding and climate adaptation. *"Respect for the natural environment"* indicates that there will not be any significant negative effects on SA objectives for biodiversity, the natural environment and resources. *"Strong commitment to housing and employment needs"* for all with *"improved infrastructure"* progresses SA objectives for accessibility. Overall, the JCS Vision strongly promotes the objectives for sustainable development as set out in the SA Framework.
- 7.11 The uncertainties identified within the compatibility analysis relate to overarching nature of the vision, which cannot be expected to cover all aspects of sustainability in detail although it is considered that the wording referring to 'the highest possible standards of design,' may implicitly include measures which would support the SA objective of Waste and pollution. However with regard to Education and skills, inserting 'learn' after 'live' before 'work' would improve the certainty of positive effects on this SA Objective.
- 7.12 It is suggested that the third paragraph relating to character and identity could be improved to address the needs of all protected characteristics. It was suggested that this could be done by amending the third paragraph of the Vision to read 'the character and identity of individual communities will have been retained while improved access to housing will have addressed the needs of **[all including]** the needs of young families, single people and the elderly.
- 7.13 The **JCS Strategic Objectives** were refined as a result of responses received to consultation. They were also realigned to demonstrate clear compliance with the themes of the National Planning Policy Framework; in some cases they were simplified, amalgamated and/or localised. The revised Strategic Objectives are set out below:

JCS Strategic Objective 1: Building a strong and competitive economy

Develop the potential of the JCS area for further economic and commercial investment by:

- Providing the right conditions and sufficient land in appropriate locations to support existing businesses and attract new ones, particularly from the major, high-tech and knowledge based industries, tourism, retail and the leisure sector to rebalance the local economy away from its public sector dominance, improve the area's economic resilience, support a highly skilled workforce and continue to provide a focus for economic growth within the County.
- Providing favourable conditions, in partnership with others such as the Local Enterprise Partnership (LEP), for business start-ups, entrepreneurship and the improvement and expansion of education and training facilities to develop the skills employers need
- Developing the area's role as a tourist destination in the south west, building on its unique characteristics and festival culture that already exist in the JCS area.

JCS Strategic Objective 2: Ensuring vitality of town centres

Creating the conditions for maintaining and strengthening a balanced hierarchy and network of city, town and district centres by:

- Providing for sufficient retail, employment, social, cultural, tourist and other appropriate uses within the designated centres to improve their vitality and viability, supporting accessibility and environmental improvements and town centre regeneration measures.
- Prioritising the delivery of key regeneration sites.
- Supporting a diverse retail offer across the three designated centres of Gloucester, Cheltenham and Tewkesbury to complement each other and thereby increase competitiveness with centres outside the JCS area.

JCS Strategic Objective 3: Supporting a prosperous rural economy

Facilitating rural employment generation and diversification by:

- Supporting the needs of agricultural businesses, encouraging farm diversification, the development of small rural business units, the conversion of existing buildings for rural business use and home working.
- Supporting and safeguarding, in partnership with others, the provision and retention of village shops that serve the everyday needs of a local community

JCS Strategic Objective 4: Conserving and enhancing the environment

- Protect and enhance the JCS area's unique historic environment, its archaeological heritage and geological assets.
- Conserve, manage and enhance the area's unique natural environment and great biodiversity, including its waterways, SSSIs, the Cotswold AONB, and areas of landscape and biodiversity importance and maximise the opportunities to use land for active flood plain.
- Ensure all new developments support green infrastructure and improve existing green infrastructure within urban and rural areas to provide movement corridors for people and wildlife.
- Review the current green belt boundary with a view to releasing land to help meet the long term development needs of the area that cannot be accommodated elsewhere, whilst providing a long term permanent boundary for the future.

JCS Strategic Objective 5: Delivering excellent design in new developments

Ensuring that all new developments will be valued by residents as they:

- Are well integrated with existing communities with regard to transport, infrastructure and service links and their visual appearance.
- Have created their own distinct sense of place, which was informed by high quality and inclusive design reflecting typical local settlement patterns, landscape character, house types and materials from the JCS area thereby producing a high quality built environment that respects and enhances local distinctiveness.
- Have provided the services, social and physical infrastructure which residents need.

JCS Strategic Objective 6: Meeting the challenge of climate change

Making the fullest contribution possible to the mitigation of, and adaptation to, climate change and the transition to a low carbon economy, by:

- Making the best use of land by maximising the use of previously developed land and encouraging higher density developments in central locations, whilst promoting food security by protecting the highest grade agricultural land and allotments.
- Reducing the use of fossil fuels by increasing self-containment of settlements through mixed use developments and providing new developments in sustainable locations.
- In partnership with others, promoting the efficient use of natural resources, the re-use and recycling of resources, the production and consumption of renewable energy and the decentralisation of energy generation.
- Encouraging and facilitating the development of low and zero carbon energy development by requiring all new developments to conform to the emerging national Sustainable Drainage Systems (SUDS) standards, all new housing developments to achieve at least Code Level 4 of the Code for Sustainable Homes and all new non-residential developments to achieve at least BREEAM 'Excellent' standard.
- Ensuring that new development is located in areas which are not liable to flooding, that existing infrastructure is adequately protected from the threat of flooding and that existing flood defences are protected and enhanced.

JCS Strategic Objective 7: Promoting sustainable transport

Reducing the need to travel and the reliance on the car by:

- Improving existing walking and cycling routes to a wide-range of shopping, employment and community facilities making them safer and more attractive to use.
- Providing frequent public transport links and safe walking and cycling routes in all new developments.
- Improving access to services in rural and urban areas through new development, improved transport links and supporting local and community led transport initiatives.

JCS Strategic Objective 8: Delivering a wide choice of quality homes

Delivering good quality new housing to meet the needs of the current and future population and ensure greater affordability for all sectors of the community by:

- Delivering a sufficient number of market and affordable housing.
- Delivering residential developments that are supported by the necessary community and social infrastructure, such as schools, open space and health facilities.
- Delivering housing of the right size, type and tenure to ensure the creation of mixed communities located in sustainable locations with good access to jobs and services.
- Meeting the housing needs of all age groups, vulnerable groups and gypsies, travellers and travelling showpeople.

JCS Strategic Objective 9: Promoting healthy communities

Promote development that contributes to a healthy population by:

- Providing for good access to the countryside and all open spaces through the retention and development of a comprehensive green infrastructure network.
- In partnership with others, creating stronger communities by reducing inequality and social exclusion and thereby increasing social wellbeing.
- In partnership with others, encouraging healthy lifestyles and a well society through access to key community facilities and services, open spaces and cycle/foot paths.
- Ensuring that environmental quality and air quality is protected.

7.14 A compatibility analysis of the GCT JCS Strategic Objectives (refined as a result of consultation and updated evidence in 2013) was undertaken afresh using the SA framework in August 2013 and the details are provided in this SA Report in Appendix VI. The Draft JCS Strategic Objectives seek to support the Vision were found to be compatible with the majority of the SA Objectives. At this strategic high level there are complex inter-relationships between the JCS Objectives; some are wide reaching in their potential effects whilst others are neutral or not relevant because some plan objectives are very specific and therefore only relate to certain SA topics.

7.15 Overall, the SA found that at least one JCS Objective is compatible with at least one of all the SA Objectives which means that all uncertainties are mitigated to a certain extent. Some uncertainties exist due to the high level nature of the Objectives and cannot be mitigated until more details are known at a later stage or lower level of the plan making process.

7.16 The SA made two recommendations for the JCS Strategic Objectives to reduce uncertainty and lead to more certain positive compatibility effects as follows:

- There are no JCS objectives relating specifically to safety, and waste and pollution. Safety could be easily captured in the wording in: 'Building a strong competitive economy;' 'Ensuring vitality of city/town centres;' 'Requiring good design;' and 'Promoting healthy communities.' The latter two Objectives could also easily incorporate sub-objectives to reduce waste and pollution.

- 'Meeting the challenge of climate change' should be consistent with the requirements for BREEAM and Code for Sustainable Homes as set out in Policy S 3. The Policy sets a higher standard after 2016 for development to meet.

Distribution Strategy

- 7.17 An urban focus was identified as the preferred (and most sustainable) approach to accommodate the housing, employment and associated infrastructure needs for the JCS during early preparation of the plan, and as presented in 2011 in the Developing the Preferred Option document. In 2013 it was decided to revisit the potential strategic options for distributing development in the JCS area in consideration of the changes to the planning system, the time passed since that consultation, and the updated evidence base, in order to evaluate if the urban focus was still the most sustainable option and that the reasons for this preferred option were still valid.
- 7.18 Options were considered as set out in the table below with relative indicative percentages for distributing the quantum of development based on the objectively assessed need of 33,200 dwellings that had been independently derived from various housing studies⁷⁹.

Table 7.1: Options for Distributing Development

	Strategic Approach for Distributing Development	Urban Capacity	Urban Extensions	Rural Area	Expansion New Settlement
A	Urban Focus	32%	63%	5%	0%
B	Rural Dispersal	32%	0%	68%	0%
C	Significant Expansion(s) New Settlement(s)	32%	0%	5%	63%
Significant urban expansion assumed to be around 2000 dwellings; new settlement assumed to be around 20,000 dwellings.					

- 7.19 The three strategic approaches to distributing development were appraised using the SA framework of objectives and the details are presented in Appendix VII of this SA Report. The findings of this 2013 SA indicated that the urban focus was still likely to be the most sustainable option and supported its continuing progression as the distribution strategy for the JCS. The findings of the SA are summarised below and provide the reasons for selection of the

⁷⁹ Nathaniel Litchfield & Partners (Sept 2012) Assessment of Housing Needs Gloucester, Cheltenham & Tewkesbury Joint Core Strategy; Cambridge Centre for Housing and Planning Research (May 2013) The new Household Projections and their implications for the Cheltenham Borough Council, Gloucester City Council and Tewkesbury Borough Council areas; and Nathaniel Litchfield & Partners (Jun 2013) Assessment of Housing Needs Addendum.

urban focus and rejection of the other options. For all the distribution scenarios, the SA found significant uncertainty of effects associated with the quantum of development and capacity/character of urban and rural areas to accommodate development growth, and the individual site or broad locational characteristics. As the quantum of new development increases, the risk of negative effects may increase together with reduced certainty of mitigation effectiveness. However, increasing quantum may also reach a threshold above which development could result in positive effects, for example, provision of additional supporting services, and viability of a renewable energy scheme.

- 7.20 The significance of certain effects (positive and negative) and the effectiveness of potential mitigation possibilities are dependent on more detailed site studies at the project level of planning and development management policies (DMPs). For example, all new development can be designed to reduce crime and reduce inequalities through enhancing accessibility; all new development can be required to be subject to high standards of sustainability and design quality. This uncertainty is consistent with such high level strategic appraisal. Nonetheless, the comparative SA found a differentiation between the 3 scenarios.
- 7.21 **Scenario A Urban Focus:** The SA found potentially negative effects on biodiversity in urban areas but this then reduces effects on rural areas. Larger urban extensions are more likely to be able to incorporate sustainable energy, water and transport systems with positive effects. There is increased risk of negative effects on historic environment, townscapes & open/green space. Major positive effects indicated for encouraging inward investment & supporting employment leading to economic resilience in both urban and rural areas. Also positive effects for communities, particularly through accessibility – phasing will be important to ensure that existing services are not overloaded and that provision of new services is timely.
- 7.22 A major positive effect for housing as this option is likely to provide the range and mix of housing to meet the needs of everyone within the timescale of the JCS. Overall, the strategic option for distributing development through an urban focus has the most positive effects; although some potential effects on environmental quality and services for communities are indicated, these may be mitigated through careful planning and phasing of development. This option also has more certainty. Thus the urban focus option is indicated to be the most sustainable strategic option for the JCS.
- 7.23 **Scenario B Rural Dispersal:** The SA found major negative effects for locally important biodiversity but will protect biodiversity in urban areas. Also negative effects on climate change adaptation & mitigation, flooding, transport and accessibility as smaller and dispersed sites are less likely to be able to incorporate sustainable energy, water and transport systems; negative effects on agricultural land and rural landscapes but would protect townscapes/landscapes in urban areas; and negative effects on economy because rural dispersal not supported by inward investment; major negative effects on vitality of city/town centres if development directed away.

- 7.24 There are significant uncertainties for communities as smaller developers less able to include developer contributions towards green space and other benefits; less positive and uncertain effects for housing since rural dispersal unlikely to be able to provide the required range of housing types and tenures. Overall, the strategic option for distributing development through rural dispersal has many negative and uncertain effects; it is unlikely to be able to provide the range & need of housing and therefore cannot progress sustainable development.
- 7.25 **Scenario C Major Expansion(s); New Settlement(s):** The SA found that a major expansion and/or new settlement could have major positive effects for climate change adaptation and mitigation, flooding and sustainable construction and operation since the scale of development offers thresholds for energy, emissions and resources use efficiencies in implementation, including opportunities for zero carbon and zero water use, together with low carbon forms of transport and access – cumulative effects particularly in the longer term. The scale of such development indicates negative effects on soils, landscape, green/open space; major constraints of Green Belt and AONB; likely negative (maybe some positive effects in longer term) on biodiversity especially in short term.
- 7.26 There is significant uncertainty for socio-economic factors; potential positive effects since scale can provide opportunities, including new unique investment) but major negative effects on vitality & viability of existing city & town centres through introduction of a new competitor centre, likely negative effects on economic resilience & communities of existing settlements, difficulties of integrating new communities. Potentially major positive effects for housing since the scale could provide the range of type, size & tenure with flexibility – but uncertainty since unlikely to meet the need within the timescale of the JCS.
- 7.27 Overall, this strategic option of distributing development through a major expansion and/or new settlement could have both major positive and negative effects; however, there was also considerable uncertainty. Constraints and assets analysis indicates that no sustainable location for a major expansion and/or new settlement could be found within the JCS area which would not have significant negative effects on the Green Belt and/or the AONB, or damage the social and economic viability of existing settlements. No promoters have indicated any interest. It is unlikely that a major expansion or new settlement could be viable or deliverable within the timescale of the JCS. Accordingly, this option for distributing development is not realistic or sustainable for development.

Potential Strategic Allocations and Non-JCS Sites

- 7.28 All the potential Strategic Allocations and non-JCS sites considered have been developed, enhanced and refined from the options presented and appraised during the various stages of plan making. The Strategic Allocations have been refined in an iterative way, taking into account technical studies, the findings of previous SA and the responses to consultation. The majority of the current allocations were identified as Strategic Allocations and Broad

Locations in the JCS Gloucester-Cheltenham-Tewkesbury Developing the Preferred Option Consultation Document (GCT, 2011). The Broad locations in which the Strategic Allocations sit were appraised at a high level in the JCS Gloucester-Cheltenham-Tewkesbury Initial Sustainability Appraisal Summary Report (GCT, 2011) prior to selection in Developing the Preferred Option 2011. In addition, some sites were initially proposed as part of 'Areas of Search for Urban Extensions' in 'The Draft Regional Spatial Strategy for the South West 2004 – 2006 (South West Regional Assembly, 2004) (hereafter known as SW RSS 2004 - 2006)'.

- 7.29 The SA of Potential Strategic Allocations and Non-JCS Site 2013 appraised the proposed development areas identified to deliver new homes and jobs across the JCS area for the JCS Draft 2013. The options were arranged according to which administrative area (Gloucester, Cheltenham or Tewkesbury) they are located in, and in total, 16 different potential development allocation areas were appraised, each with up to four different development options. The SAs took into account mitigation that was provided through requirements for development set out in an early version of Policy SA 1 - Requirements for Strategic Allocations and also site specific requirements set out in the description of the sites. The following paragraphs provide a summary of the findings of the SA of the Potential Strategic Allocations and Non-JCS Sites for the Draft JCS 2013. Details of the sustainability appraisals of all the sites and options considered are provided in Appendix VIII (a, b, c) of this SA Report.

Gloucester

Innsworth G1

- 7.30 This Potential Strategic Allocation is located on a parcel of Land to the north of the City of Gloucester, adjacent to Innsworth. It was part of one of the 'Areas of Search for Urban Extensions' that were initially proposed in the SW RSS 2004 – 2006. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) where a recommendation was made to reduce the development area to the south (see previously Table 6.3 for more details). As a result, the reduced area was put forward as a potential Strategic Allocation in the JCS Developing the Preferred Option 2011. Since 2011 it has been developed and re-worked and two Options for development have been proposed. Option 1 seeks to provide for 55.7 ha (1404 dwellings) and 9.1 ha of employment land and also included: a new junction from A40; new primary school and children's centre; and new local centre with community facilities. Option 2 seeks to provide 138.4 ha (3488 dwellings) and double the amount of schools and local centres but with the same amount of employment land and the new junction from A40 as offered with Option 1.
- 7.31 Both Options were subject to detailed SA and were found to support the SA objective for Transport with both likely to lead to major positive effects on the following SA objectives: Biodiversity; Flooding; Sustainable communities - equality and well being; Green space; and Education and skills. Option 1 is more likely to have significant positive effects with regard to Transport than Option 2 as the increase in size of more than doubling the housing allocation

could risk pressure on existing transport capacities. The greater quantum of development in Option 2 may better reach thresholds for carbon neutrality and/or provision of energy to the National Grid and therefore may have more positive effects on the SA objective of climate change adaptation compared to Option 1.

- 7.32 No major significant negative environmental effects were identified although there could be potential for minor negative effects on the SA objectives of Resources – use and quality, and Waste and pollution. This is due to a number of reasons including: the location of the Options on Greenfield land in the green belt, being located in a groundwater drinking water protected area, and the scale of the development proposed in each Option.

Gloucestershire Airport G2

- 7.33 This Strategic Allocation located on Land to the north/ north east of the City of Gloucester includes Gloucestershire Airport. This site was first considered as a Broad Location in the JCS Gloucester-Cheltenham-Tewkesbury Developing the Preferred Option Consultation Document (GCT, 2011) to accommodate shortfall in development between 2021 & 2031 and was included in all themes 1 – 3 to address the shortfall. Four Options for development were considered with the scale of development increasing for each Option with the most development being allocated for Option 4.

- 7.34 All Options were considered to support the SA objectives of Sustainable communities – safety and Education and skills with all Options being likely to lead to major positive effects on the following SA objectives: Biodiversity; Flooding; and Sustainable communities - equality and well being. Options 2, 3 and 4 are more likely to have major positive effects on the Economy as they provide for a large amount of employment land and the greater quantum of development in Option 4 should provide opportunities to include major areas of Green Infrastructure (GI) - linking with the GI network and maintaining some linkages and green space between the 2 urban areas with greater indirect positive effects on health, compared to the other Options.

- 7.35 The SA found that there could be potential minor negative effects on the SA objectives of Resources – use (Option 1 - 3) and Waste and pollution (all options) given the location of the Options (Greenfield land in the green belt) and the scale of the development proposed. However, only Option 4 was considered likely to have major negative effects on the SA objective of Resources – use; the larger quantum of development would cover an area which significantly contributes to the green belt and that contributes (in small part) to the visual gap between Gloucester and Cheltenham.

North East Gloucester G3

- 7.36 This site is located on two parcels of Land to the North East of Gloucester City. This site was firstly considered as a Broad Location in the JCS GCT Developing the Preferred Option Consultation Document (GCT, 2011) to accommodate shortfall in development between 2021 & 2031 and was included in themes 1 and 3 to address the shortfall. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (GCT, 2011) where it was suggested that the area was not suitable for large scale housing but should

be considered further for employment purposes (please see also previous Table 6.3). As a result two Options for development were created which made provision for just over of 300 houses and for a park and ride extension. Option 2 also included 17.4 ha of employment land.

- 7.37 Both Options are likely to lead to major positive effects on the following SA objectives: Biodiversity; Sustainable Communities – equalities; and Health. In addition, both Options support the SA objective of Transport with uncertainty of effects on education and skills.
- 7.38 No major negative effects were identified although it was considered that there could be potential minor negative effects on the SA objectives of Resources – quality, and Waste and pollution. Given the proximity of the main road to the proposed residential development for all options, it was recommended that for this particular allocation, wording is inserted to require a noise assessment to be carried out to identify possible noise impacts and suggest appropriate mitigation. This should reduce negative effects and lead to neutral residual effects on noise.
- 7.39 Furthermore, Option 1 was considered likely to lead to minor positive effects on Green space whilst Option 2 is likely to lead to negative effects given the greater quantum of development.

Brockworth G4

- 7.40 This site is located on Land to the east of the City of Gloucester to the north-east of Brockworth. As with site Innsworth G1, it was part of one of the 'Areas of Search for Urban Extensions' that were initially proposed in the SW RSS 2004 – 2006. It was progressed as JCS Strategic Allocation: Brockworth in the 'JCS GCT Developing the Preferred Option Consultation Document (GCT, 2011).' Since 2004, little has changed in terms of the scale and type of development proposed. Two Options for development were considered which proposed similar amounts of housing, 1172 dwellings for Option 1 and 1500 for Option 2 with 13 ha of employment land provided for in Option1 only.
- 7.41 Both Options were subject to SA and were found to have major positive effects on the following SA objectives: Biodiversity; Flooding; Sustainable communities - equality and well being; Green Space; and Education and skills. In addition, both Options were considered to support the SA objectives of Transport and City and Town Centres. Option 1 was assessed as being likely to lead to major positive effects on the economy as a result of employment land being provided.
- 7.42 No major negative effects were identified although it was considered there is potential for minor negative effects on the SA objectives of Resources – quality and use, Historic environment and Waste and pollution given that the Options are both located on Greenfield land in the Green belt with a small part adjacent to the Cotswold AONB; the presence of heritage assets; and the scale of the development proposed.

Highnam G8

- 7.43 This Strategic Allocation included two parcels of Land (Option 1 and Option 2) to the west of the City of Gloucester and in the vicinity of the town of Highnam. Option 1 was situated immediately adjacent the settlement of Highnam and Option 2 was located to the south of Highnam beneath A40. This area around Highnam including the settlement itself was firstly considered as a Broad Location in the JCS GCT Developing the Preferred Option Consultation Document (2011) to accommodate shortfall in development between 2021 & 2031 and was included in theme 2 to address the shortfall. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) where it was suggested that large scale development here could overwhelm the existing settlement of Highnam (please see also previous Table 6.3). As a result the two Options investigated made provision for between 100 and 300 with Option 1 providing for the following: 4.2 ha of employment land; new community centre/ hub with retail and community facilities; new primary school; park and Ride; and Improvements to highway infrastructure including to A40 junction serving Highnam.
- 7.44 It is important to note that these Options were considered to be relatively remote from Gloucester City and other services and as a result do not support the SA objectives on Transport and City and town centres are much as other potential site allocations. Option 2, given its' small size, is unlikely to have any major effects and was found to have a neutral effect on many of the SA Objectives compared to Option 1.
- 7.45 Major negative effects were identified on Resources – use for Option 1 as it will result in the loss of some high grade (grade 1) agricultural land. However, both Options were considered likely to lead to major positive environmental effects on the following SA objectives: Biodiversity through opportunities to enhance and improve existing habitats. Option 1, given its' large size, was considered more likely to lead to significant positive effects on the following SA objectives: Sustainable communities - equality and well being; and Education and skills.
- 7.46 Several recommendations were made by the SA to improve the sustainability of the options and/or provide mitigation for certain negative effects:
- Consideration should be given to inserting wording to enhance the existing nature reserve adjacent to Option 1, possibly to increase the size of it or to offer contributions towards its management.
 - For Option 1, given the high potential for archaeology, consideration should be given to inserting specific policy wording requiring that an archaeological assessment of the site is carried out prior to construction.
 - For Option 2, it is recommended that for this particular allocation, wording is inserted to require a noise assessment to be carried out to identify possible noise impacts and suggest appropriate mitigation, given its' proximity to major roads and the railway line.
- None of these options were taken forward into the Draft JCS (see Table 7.2 following).

South of Churchdown G9

- 7.47 The site is located to the South of Churchdown to the east of Gloucester city. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal

Summary Report (2011) where it was suggested that if a site could be developed without encroaching on the designated important greenspace and masterplanned to retain some green and visual divide between the settlements it could be one of the most sustainable locations (please see Table 6.3). It was progressed as JCS Strategic Allocation: Churchdown in the JCS GCT Developing the Preferred Option Consultation Document (2011). Since 2011, two Options for development were created which included housing and land set aside for green infrastructure/ a landscape buffer. Option 2 made provision for approximately twice the amount of housing proposed in Option 1 and also included provision of a new access road.

7.48 Both Options were subject to detailed SA and were found to be likely to lead to major positive effects on Flooding. No major negative effects were identified although it was considered that there is potential for minor negative effects on the SA objectives of Resources – quality and Waste and pollution. Option 1 for G9, given its' small size, was found to have a neutral effect on many of the SA Objectives compared to the Option 2.

7.49 The following recommendations were made in the SA:

- For both Options, consideration should be given to inserting wording to protect the mature hedgerow around the borders of the site with the exception to allow for the provision of access. This will help to increase certainty of positive effects on biodiversity.
- Given the proximity of the main road to the proposed residential development for all options, it is recommended that for this particular allocation, wording is inserted to require a noise assessment to be carried out to identify possible noise impacts and suggest appropriate mitigation, given its' proximity to major roads and the railway line. This should reduce negative effects a lead to neutral residual effects on noise.

Churchdown G3/ G9

7.50 This was considered to be an alternative Option for the other Strategic Allocations at G3 and G9 given their proximity to one another. Two potential options for development at both sites (G3 and G9) were developed which included housing, a park and ride extension and an extra care facility if the evidence demonstrated a need. Option 2 also made provision for 17.4 ha of employment land.

7.51 The major positive effects identified by the SA for both G3 and G9 previously, were considered to still apply for both Options and again no major negative effects were identified. However, both Options for G9 with G3 offer more significant positive effects on more SA objectives than those for G9 and G3 on their own, as a direct result of providing a larger quantum of development with both additional employment and housing as well as specified road improvements.

7.52 The SA recommendations presented above in G9 apply to development in these two Options. It was also recommended that a school is included in the provision as this would lead to major positive residual effects on Education and skills.

Non-JCS Site - Land at Brookthorpe/Whaddon

- 7.53 The site is located on a parcel of land to the south of Gloucester and is bounded by the M5 to the south and the main Gloucester railway line to the west. Development of the site would support the SA objectives of: Climate Change Adaptation and Mitigation; Transport; City and Town Centres; Sustainable Communities – equalities; Health; and Green Space. Uncertain effects have been identified on Historic Environment; Economy; Education and Skills; and Sustainable Communities – safety. There is potential for minor negative effects on the SA objective of: Waste and Pollution; soils (loss of moderate to good quality agricultural land); and on water quality/ use.
- 7.54 Development of the site is likely to lead to major negative effects on flooding given that 5% is located in an area of medium to high risk flooding. Development of the site to its maximum potential is likely to lead to major negative effects on landscape given its high to medium sensitivity owing to the fact that it is highly visible from the elevated AONB and Robinswood Hill landscapes. The SA recommended that the area identified as being at risk of flooding should be excluded from any development and only smaller scale development could be progressed given the landscape sensitivity of the site.

Non-JCS Site - Land at Hardwicke

- 7.55 The site is located on a parcel of land to the south-west of Gloucester and is bounded by the Gloucester and Sharpness Canal to the north-west and the A38 to the south-east. Development of the site would support the SA objectives of: Climate Change Adaptation and Mitigation; landscape; Transport; Sustainable Communities – equalities; Health; Green Space; and Education and Skills. Uncertain effects have been identified on Historic Environment; Economy; and Sustainable Communities – safety. There is potential for minor negative effects on the SA objective of: Waste and Pollution; development on Greenfield land; and on water quality/ use. Development of the site is likely to lead to major negative on flooding given that 12% is located in an area of medium to high risk flooding. The SA recommended that the area identified as being at risk of flooding should be excluded from any development.

Cheltenham

North Cheltenham C2

- 7.56 This Allocation is located on Land to the north of the Cheltenham, close to the Racecourse. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) where it recommended that only sub areas C2c – Land to the West of Cheltenham Racecourse; and the most southern part of C2d – Land between the mainline railway and the A435, be retained in the JCS Broad Location search (please see also previous Table 6.3). These sub-areas were then progressed as a potential Broad Location to accommodate shortfall in development between 2021 & 2031 in the 'CS GCT Developing the Preferred Option Consultation Document (2011). Since 2011, the area has been reduced further in size and two Options for development were considered. Both Options sought to provide housing only with Option 2 providing almost double the amount of housing compared to Option 1.

- 7.57 Given that there is little difference between the two Options other than more housing being proposed in Option 2, the Options have similar effects on all of the SA objectives. They were considered to support the SA objectives of Sustainable Communities – equality and Green space with uncertainty of effects on Education and skills. With reference to biodiversity, it was recommended that both Options should retain the traditional orchard as part of any development scheme. The certainty of major positive effects on Housing is greater for this Option 2 given that almost double the amount of housing is proposed.
- 7.58 No likely major negative effects were identified although there is potential for minor negative effects on the SA objectives of: Resources – quality and use; and Waste and pollution. This is because the Options are located on Greenfield land in the Green Belt and in a drinking water protected area and because of the scale of the development proposed. In addition, there is the possibility of cumulative negative effects (short to long-term) with regard to landscape, resource use and transport if progressed with allocation C3.

North West Cheltenham C3

- 7.59 This potential Strategic Allocation is located on a parcel of Land to the North West of the Cheltenham. It was part of one of the 'Areas of Search for Urban Extensions' that were initially proposed in the SW RSS 2004 – 2006. It was progressed as JCS Strategic Allocation: North West Cheltenham in the JCS GCT Developing the Preferred Option Consultation Document (2011).' Since 2004, the allocation has been re-worked and refined which has led to two Options for development being put forward. Option 1 makes provision for between approximately 3000 and 5000 dwellings along with 11.6 ha of employment land and an additional 89.25 ha of mixed use development. Option 2 provides approximately 4800 dwellings with 23.3 ha of employment land and a safeguarded area for future development beyond the timeframe of the JCS.
- 7.60 The SA found that both options were likely to lead to major positive effects on the following SA objectives Climate change mitigation and Sustainable communities - equality and well being. Option 1 is more likely to have significant positive effects with regard to Education and skills as the allocation includes the provision of a school. Both Options were considered to support the SA objective of Green Space with minor positive effects.
- 7.61 No major negative effects were identified although it was considered that there is potential for minor negative effects on the SA objectives of Resources – use and quality and Waste and pollution, given the location of the Options on Greenfield land in the green belt, being partly on a groundwater drinking water protected area and also the scale of the development proposed. The Western edge of the Option 1 is adjacent to the main railway line linking Cheltenham to the North which could mean that noise may affect the dwelling houses proposed. The M5 is adjacent to the Western edge of the allocation site and could also have implications in terms of noise. The SA recommended that for this particular potential allocation, wording is inserted to require a noise assessment to be carried out to identify possible noise impacts and suggest appropriate mitigation. Option 2 contains a small area

of land in Flood zones 2 and 3. There is the possibility of cumulative negative effects (short to long-term) with regard to landscape, resource use (loss of Green belt and Greenfield land) and transport if progressed with allocation C2.

West Cheltenham C5

- 7.62 The potential Allocation is located on a parcel of Land to the West of the Cheltenham. The area in which the Allocation sits was subject to a high level SA in the JCS GCT Initial Sustainability Appraisal Summary Report (2011), where it recommended that the southern and eastern parts of this broad location are taken forward in the JCS process (please see also previous table 6.3). The Allocation sits on a much reduced eastern part of the area suggested to be taken forward by the initial SA (2011) and an Option for development was created which included proposing land for employment purposes only.
- 7.63 The SA found that this was likely to lead to major positive effects on the SA objective of Biodiversity. It was also considered to support the SA objectives of Transport and Green Space with minor positive effects. There is uncertainty of effects on: Historic environment; Education and skills; and Sustainable communities –equalities.
- 7.64 One major negative effect was identified with regard to Waste and pollution. This is due to the site being adjacent to a sewage treatment facility and there being evidence of historic spreading of treated sewage sludge in the area which can lead to heavy metal contamination. Therefore there is potential for contamination to be present and odour could be significant issue. The SA also found that there is potential for minor negative effects on the SA objectives of Resources – use and quality, as the Option is located on Greenfield land in the Green Belt and as a result of the large scale of the development proposed.

South Cheltenham C6b

- 7.65 The potential Allocation is located on a parcel of Land to the South West of the Cheltenham. It was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) where it recommended that the Broad Location in which the allocation sits should be reduced in size and three segments should be taken forward (please see Table 6.3). These segments were then progressed as potential Broad Location to accommodate shortfall in development between 2021 & 2031 in the JCS GCT Developing the Preferred Option Consultation Document (2011). The segment in which the potential Allocation sits is the land South-East of the railway line around Up Hatherley on either side of Sunnfield Lane between Coldport Lane and Chargrove Lane. Since 2011, the potential allocation has been refined and two options for development have been put forward. Option 1 includes provision for just over 800 dwellings only and Option 2 makes provision for just over 400 dwellings and 17 ha of employment land.
- 7.66 Both Options were subject to detailed SA and found to have major positive effects on the following SA objectives - Biodiversity and Transport. Option 2 was found to be likely to lead to major positive effects on the economy. Both Options were considered to support with minor positive effects on the SA

objectives of: Green Space; Historic environment; and Sustainable communities – equalities with uncertainty of effects on Education and skills.

- 7.67 No major negative effects were identified although there is potential for minor negative effects on the SA objectives of Resources – use and quality, and Waste and pollution given the location of the Options on Greenfield land in the green belt which is of medium landscape sensitivity and the scale of the development proposed. With regard to landscape, it was suggested by the SA that further mitigation could be appropriate in the form of the policy requiring only low density and low rise development.

South Cheltenham C6

- 7.68 This potential Strategic Allocation is located on Land to the south of Cheltenham which is adjacent to the Cotswolds AONB. As with sites 5 other sites, it was part of one of the 'Areas of Search for Urban Extensions' that were initially proposed in the SW RSS 2004 – 2006. It was progressed as JCS Strategic Allocation: South Cheltenham in the JCS GCT Developing the Preferred Option Consultation Document (2011). Since 2004, the potential allocation has been re-worked and refined which has led to three Options for development being put forward. All Options made provision for 6.8 ha of employment land and also for housing with the level of housing development increasing with every Option.
- 7.69 All Options were considered likely to lead to major positive effects on the following SA objectives: Sustainable communities - equality and well being and Health. In addition, all Options were considered to support the SA objectives of: Historic Environment; Sustainable communities – safety; and Education and skills. The SA recommended that the traditional orchard between Kidnappers Lane and Farm lane should be included as part of the landscape/ buffer.
- 7.70 It was assessed that Options 2, 3 and 4 were likely to have major negative effects on the SA objective of Resources – quality as the larger quantum of development could affect the AONB and the buffer between Cheltenham and the AONB. It was also found that there is potential for minor negative effects on the SA objectives of Flooding (Option 2, 3 & 4); Transport (Option 2, 3 & 4); Green space (Options 2, 3 & 4); Resources – use; and Waste and pollution (all options), given the location of the Options on Greenfield land in the Green Belt, being located partly in a groundwater drinking water protected area, the presence of existing transport problems and the scale of the development proposed.

Tewkesbury

MOD T2

- 7.71 This potential Strategic Allocation is located on a parcel of Land to the East of the Ashchurch and is a former MOD site. The site was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) and then was put forward as a Strategic Allocation in the JCS GCT Developing the Preferred Option Consultation Document (2011). Since 2011 it has been enhanced to provide a large development, the majority of which is on

Brownfield land, to accommodate approximately 2238 dwellings and 80 ha of mixed use land.

- 7.72 The SA found that there were likely to be major positive effects on the following SA objectives: Climate change mitigation; Resources – quality and use; Transport; and Sustainable communities – equalities. Minor positive effects were likely for the SA objective of Green Space with uncertainty of effects on Education and skills. With regard to Biodiversity, the SA recommended that additional wording should be added to protect and enhance the more valued habitats on the site especially to the North to increase the positive effects to (possibly to major residual effects).
- 7.73 No major negative effects were identified although if taken forward with allocation T3 there could be negative cumulative effects with regard to road capacity (Junction 9 of the M5). The SA considered that there is potential for minor negative effects the SA objective of Waste and pollution given the scale of the development proposed and the proximity of existing residential development.

Ashchurch T3

- 7.74 The potential Allocation is located on a parcel of Land to the west of the Ashchurch and is by the M5 to the East and a Brook to the south. The site was assessed at a high level in the JCS GCT Initial Sustainability Appraisal Summary Report (2011) where the recommendation was made to remove it from further JCS consideration for a number of reasons including flooding, transport and access (see table 6.3). The site however has been reconsidered to be progressed as it is close to the M5 with good access and high viability. Given the issues identified, a much smaller area has been proposed and the potential Allocation seeks to provide employment land at 14.3 ha only.
- 7.75 The SA found likely major positive effects on the following SA objectives: Biodiversity; and Education and skills (through contributions towards a new primary school). The option was also considered to support the SA objectives of: Transport; Sustainable communities – equalities; and Green Space.
- 7.76 No major negative effects were identified although as mentioned previously, there could be negative cumulative effects with regard to road capacity (Junction 9 of the M5) if progressed with Strategic Allocation MOD T2. In addition, there is potential for minor negative effects on the SA objective of Waste and pollution and on water quality given the location of the site and the scale of the development proposed.

Non-JCS Site - Land at Mitton

- 7.77 The site is located on a parcel of land to the North of Tewkesbury and is by the M5 to the East. Development of the site would support the SA objectives of: Climate Change Adaptation and Mitigation; Transport; Sustainable Communities – equalities; Health; and Green Space with uncertainty of effects on: Historic Environment; Economy; and Sustainable Communities – safety. There is potential for minor negative effects on the SA Objectives of: City and Town Centres; Waste and Pollution; soils (loss of moderate to good quality agricultural land); and on water quality. Development of the site is

likely to lead to major negative on flooding given that 30% is located in an area of medium to high risk flooding. The SA recommended that this area of flood risk should be excluded from any potential development.

SA Findings Common to Options for Strategic Allocations and Non-JCS Sites

- 7.78 The findings of the SA of Potential Options for the Strategic Allocations identified that certain major positive effects were common to all options for the SA Objectives of 'city and town centres' and 'housing' and 'the economy' (where potentially allocated). Minor positive effects for 'climate change adaptation and mitigation' effects were also common to options as well as neutral effects on 'culture and tourism.' All potential options for Allocations were considered to support with minor positive effects for the SA objectives of 'biodiversity'; 'sustainable communities – equalities' and 'health.'
- 7.79 For the majority of options, the effects on 'historic environment' and 'Sustainable communities – safety' were considered to be uncertain at this stage as the presence of archaeology is largely unknown, and safety is largely dependent on design implemented at the development management level.
- 7.80 The positive effects found for the options appraised (and few major negative effects) reflect this later stage of SA and plan-making. The potential strategic options for allocations have previously been through several iterations of assessment and SA in order to avoid significant negative effects and promote potential positive effects.

General Recommendations for Strategic Allocations and Non-JCS Sites from the SA

- 7.81 The SA made a number of recommendations and suggestions for consideration which are applicable to all of the potential strategic allocation policies. These arose from the findings of the SA of options and the appraisal of early versions of Policy SA1 Requirements for Strategic Allocations. These recommendations if implemented could improve the certainty of positive effects or provide mitigation for negative effects, as follows:
- Consideration should be given to inserting a requirement to implement a (Sustainability) Environmental Management Plan (S/EMP) to reduce, in particular, short-term effects during construction with regard to but not limited to: noise, air quality, light, transport, waste, and use of natural resources; and to include provision for monitoring.
 - Policy should require that at least Phase 1 Habitat Survey is undertaken on each site prior to development to identify the potential for protected species.
 - A requirement for a landscape buffer around species rich hedgerows should be included which could be drawn on to the proposals maps for all strategic allocations. This will create a fragmented edge to ensure that

hedgerows do not form part of a garden of a dwelling house, thus eliminating the risk of their removal.

- Consideration should be given to inserting wording to require development (other than housing) to meet the BREEAM standard 'very good' or above.
- Consideration should be given to increasing the minimum percentage (above 10%) of established or emerging low carbon or renewable technologies of onsite energy requirements per building. It is assumed that the 10% figure came from a requirement to implement the Merton Rule under PPS 1 and there may be scope to increase the figure now. Under the Planning and Energy Act 2008, LPAs may impose reasonable requirements for (a) a proportion of energy used in development in their area to be energy from renewable sources in the locality of the development; and (b) a proportion of energy used in development in their area to be low carbon energy from sources in the locality of the development.
- It was suggested that wording is inserted to require development to comply with energy efficiency standards that exceed the energy requirements of building regulations. A standard that is reasonable for delivery should be established.
- It was recommended that there should be a separate policy requirement for the historic environment and assets as these are so important in the JCS area; such policy should also include mitigation of significant adverse effects on the settings of heritage features and direct effects on archaeology.
- Consideration should be given to including a requirement for measures to ensure equality of access to facilities and services including transport, to improve certainty of positive effects.
- It was recommended that a requirement for design to take account of crime prevention, such as through Safer Places: The Planning System and Crime Prevention Guidance (September 2004), should be included.
- It was suggested that details for encouraging people to use open space should be included in detailed masterplanning through signage and information etc.
- It is assumed that the Green Infrastructure (GI) Framework for the JCS area will include principles for GI and set out strategic areas for creating and linking GI. It will be important to include provision for longer term management of such GI, perhaps through various funding mechanisms and/or community/residents groups. If not already included in the GI Framework it is recommended that this is specified.
- If not already considered, it is recommended that the GI Framework should include the potential for provision of allotment gardens for local food production.

Most of these suggestions and recommendations from the SA were progressed as the Core, Allocation and Delivery Policies were further developed and refined. This is discussed again later in this Section 7 of the SA Report.

Strategic Allocations Options taken forward in the Draft JCS (2013)

- 7.82 As explained previously, all of the sites proposed as Strategic Allocations in the Draft JCS have been developed, enhanced and refined from the options presented and appraised in the documents produced for the different stages of plan making. The findings of the SA were summarised above and are detailed in Appendix VIII. Table 7.2 below contains summarises of the options/alternatives considered in the Draft JCS and provides an outline of the reasons for option progression or reasons for not taking the option forward at this stage.

Table 7.2 Options for Strategic Allocations (2013) Reasons for Selection or Rejection in Plan Making

Strategic Sites Options	Reasons for Selection or Rejection in Plan Making
Innsworth G1 Option 1 Description: H=55.7 ha, 1404 dwellings; E= 9.1 ha; new junction from A40; new primary school and children's centre; new local centre with community facilities	This option has been combined with G1 Option 2 to provide a comprehensive approach to the development of the area. <i>Included in the draft JCS 2013 as Policy A 1 – Innsworth and Twigworth Urban Extension, Gloucester.</i>
Innsworth G1 Option 2 Description: H= 138.4 ha, 3488 dwellings; E= 9.1 ha; new junction from A40; 2 new primary schools and children's centres; 2 new local centres with community facilities	Taken forward (combined with G1 Option 1) because this option has the potential to provide a greater level of development. However it is recognised that the flood plain in this location splits the development potential which creates difficulties in providing a comprehensive urban extension. The inclusion of a site specific policy to address masterplanning and the need to consider the area as a whole overcomes this concern. <i>Included in the draft JCS 2013 as Policy A 1 – Innsworth and Twigworth Urban Extension, Gloucester.</i>
Gloucestershire Airport G2 Option 1 Description: H=33.5 ha, 844 dwellings; new vehicular access from B4063; adjacent to Gloucestershire Airport	Taken forward because new housing development can be delivered alongside Gloucestershire Airport remaining as an operational facility subject to any constraints including airport safety zones. <i>Included in the draft JCS 2013 as Policy A 2 – North Churchdown Urban Extension, Gloucester.</i>
Gloucestershire Airport G2 Option 2 Description: H=33.5 ha, 844 dwellings; E=5.2 ha; new vehicular access from B4063 and Parton Road; adjacent to Gloucestershire Airport with employment land allocated on the airport to the North	Employment element not considered strategic in nature and therefore outside the context of the JCS; small scale employment development could be taken forward through an allocation in the Tewkesbury Local Plan.
Gloucestershire Airport G2 Option 3 Description: H=33.5 ha, 844	This option is not being taken forward due to the need to retain Gloucestershire Airport as a key regional asset. Operational land is needed to

<p>dwelling; E=25.1 ha; new vehicular access from B4063 and Parton Road; new junction from A40 Golden Valley to new strategic employment allocation; retention of main runway function at airport; and employment land allocated on the airport to the North and South</p>	<p>meet the needs of the airport and loss of this land would impact adversely on the function of the Airport.</p>
<p>Gloucestershire Airport G2 Option 4 Description: H=75 ha, 1889 dwelling; E=75 ha; new vehicular access from B4063, Parton Road and Bamfurlong Lane; new junction from A40 Golden Valley to new strategic housing and employment allocation; major mixed use for redevelopment across the whole of the area currently occupied by the airport resulting in the closure of the airport.</p>	<p>Not taken forward as Gloucestershire Airport is a key regional asset, and as such, is supported within the JCS. Wholesale redevelopment of the site is not considered an appropriate option.</p>
<p>North East Gloucester G3 Option 1 Description: H= 315 dwellings (14.3 ha) with new accesses from distributor roads; Elmbridge Park and Ride Scheme with new junction from A40 Golden Valley; and Safeguarded site for park and Ride Extension</p>	<p>Not being taken forward as it does not deliver sufficient capacity to merit strategic allocation designation.</p>
<p>North East Gloucester G3 Option 2 Description: H= 315 dwellings (14.3 ha); E= 17.4 ha employment land; new accesses from existing distributor roads; Elmbridge Park and Ride Scheme with new junction from A40 Golden Valley; and Safeguarded site for park and Ride Extension</p>	<p>This option has been combined with G9 to provide a comprehensive approach to development to the south of Churchdown.</p>
<p>Brockworth G4 Option 1 Description: H=46.5ha, E=13ha; 1172 dwellings; new roundabout from Valiant Way</p>	<p>Through discussion with the Gloucestershire LEP, it was considered that other employment sites more attractive to the market were available. Removing employment allocation offered the opportunity to deliver additional housing numbers in this location.</p>
<p>Brockworth G4 Option 2 Description: H=61.7ha, 1555 dwellings; new roundabout from Valiant Way</p>	<p>This option is being taken forward due to the need to deliver the objectively assessed housing need in a location that provides positive effects, including biodiversity improvements and good quality highways infrastructure. <i>Included in the draft JCS 2013 as Policy A4 – North Brockworth Urban Extension, Gloucester.</i></p>
<p>Brookthorpe / Whaddon</p>	<p>Not taken forward because the site is located outside the JCS area.</p>
<p>Land South of Hunts</p>	<p>Not being taken forward because the site is</p>

Grove	located outside the JCS area.
Land at Hardwicke	Not taken forward because the site is located outside the JCS area.
Highnam G8 Option 1 Description: 1380 dwellings (54.8 ha); 4.2 ha of employment land; new community centre/ hub with retail and community facilities; new primary school; park and Ride; Improvements to highway infrastructure including to A40 junction serving Highnam.	This option is not being taken forward as it does not fit with the development strategy of the JCS. The strategy is focusing on the urban centres and urban extensions to Gloucester and Cheltenham.
Highnam G8 Option 2 Description: 265 dwellings (12 ha)	This option is not being taken forward as it does not fit with the development strategy of the JCS. The strategy is focusing on the urban centres and urban extensions to Gloucester and Cheltenham.
South of Churchdown G9 Option 1 Description: H= 192 dwellings (8.7 ha)	This option is not being pursued as it does not deliver sufficient capacity to merit strategic allocation designation.
South of Churchdown G9 Option 2 Description: H= 315 dwellings (14.3 ha) with new accesses from distributor roads	This option has been combined with G3 (option 2) to provide a comprehensive approach to development to the south of Churchdown.
Churchdown G3 & G9 Option 1 Description: H= 434 dwellings (19.7 ha); new accesses from existing distributor roads; Elmbridge Park and Ride Scheme with new junction from A40 Golden Valley; Safeguarded site for park and Ride Extension; and Extra Care Facility if evidence demonstrates need	This option is not being pursued as it does not deliver sufficient capacity to merit strategic allocation designation.
Churchdown G3 & G9 Option 2 Description: H= 630 dwellings (25 ha) and E=17.4 ha of employment land; Elmbridge Park and Ride Scheme with new junction from A40 Golden Valley; Safeguarded site for park and Ride Extension; Extra Care Facility	These options are being taken forward because they provide major positive effects, for example highway infrastructure linkages, and provide a good balance of development including residential and employment. <i>Included in the draft JCS 2013 as Policy A 3 – South Churchdown Urban Extension, Gloucester.</i>
North Cheltenham C2 Option 1 Description: H=469 dwellings (18.6 ha)	Neither option is being taken forward for North Cheltenham. The inclusion of this site would not be in accordance with the Green Belt assessment methodology. It is also not considered that a new defensible Green Belt boundary can be established.
North Cheltenham C2 Option 2 Description: H=759 dwellings (30.1 ha)	Neither option is being taken forward for North Cheltenham. The inclusion of this site would not be in accordance with the Green Belt assessment methodology. It is also not considered that a new defensible Green Belt boundary could be established.

North West Cheltenham C3 Option 1 Description: H = 3074 – 5042 dwellings (139.4 ha); E = 11.6 ha employment land; and MU = 89.25 ha mixed use	<p>Not taken forward due to the difficulty in ensuring that the new development was well integrated into the urban area of Cheltenham. Also the inefficiency of the layout would lead to a less comprehensive use of the site overall.</p>
North West Cheltenham C3 Option 2 Description: H = 4825 dwellings (184.1 ha); E = 23.3 ha employment land; and a safeguarded area.	<p>Taken forward because the site performs well in sustainability terms and provides a good balance of development including residential and employment, integrating well with the existing Kingsditch industrial estate. It is a layout which integrates well with the Cheltenham urban area, and allows for future development beyond the plan period provided for by safeguarding. <i>Included in the draft JCS 2013 as Policy A5 – North West Cheltenham Urban Extension, Cheltenham.</i></p>
West Cheltenham C5 Option 1 Description: E = 36.5 ha of employment land	<p>Not taken forward due to the lack of effective access to the site for significant employment use. Also the need to sufficiently mitigate odour in this location is likely to harm development viability. It is proposed that a new Green Belt boundary is established in this area to safeguard land for future development if future odour mapping and changes to activity at the Hayden works suggest that the development exclusion zone should be reduced. <i>Included in the draft JCS 2013 as a safeguarded area for future development in Policy S 5.</i></p>
South Cheltenham C6B Option 1 H = 822 dwellings (37.3 ha)	<p>Option taken forward because it provides a suitable quantum of housing development well related to the existing urban area whilst creating a sound new green belt boundary. <i>Included in the draft JCS 2013 as Policy A7 – South Cheltenham – Up Hatherley Urban Extension, Cheltenham.</i></p>
South Cheltenham C6B Option 2 H = 422 dwellings (16.75 ha) and employment land (17 ha)	<p>Not taken forward as it was considered that other suitable employment locations were available which offered the opportunity to increase housing numbers at this location.</p>
South Cheltenham C6 Option 1 Description: H = 558 dwellings (25.3 ha) and E = 6.8 ha of employment land	<p>This option is not taken forward owing to the low development quantum of residential development proposed, also this option would not comprehensively use the Leckhampton allocated site within Tewkesbury Borough.</p>
South Cheltenham C6 Option 2 Description: H = 1101 dwellings (43.7 ha) and E = 6.8 ha of employment land	<p>Not taken forward as it was considered that other suitable employment locations were available which offered the opportunity to increase housing numbers at this location. This option would not comprehensively use the sites available including the existing site allocated within Tewkesbury borough.</p>

South Cheltenham C6 Option 3 Description: H=1169 dwellings (39.7 ha) and E = 6.8 ha of employment land	Not taken forward because it did not fully take account of the Environment Agency's and the SFRA level 2 view of flood risk in the North Eastern part of the site, and intruded into sensitive Green Belt around Brizen Farm. Considered that other suitable employment locations were available which offered the opportunity to increase housing numbers at this location.
South Cheltenham C6 Option 4 = Description: H=1075 dwellings (43.62ha)	Option taken forward because it provides a good quantum of housing development without intruding into the Green Belt or AONB. It also preserves important green corridors and reduces flood risk to new development. <i>Included in the draft JCS 2013 as Policy A6 – South Cheltenham – Leckhampton Urban Extension, Cheltenham.</i>
Land at Mitton	Not taken forward as the site is located outside the JCS area.
MOD T2 Description: Total allocation area = 128.7 ha of which H =2238 dwellings and MU = 80 ha of mixed use land	Option taken forward because it recognises the potential of a brownfield opportunity which will come forward during the plan period and provides a proactive response to what will be a vacant site plus additional land to the north. <i>Included in the draft JCS 2013 as Policy A8 – MOD Site at Ashchurch Strategic Allocation.</i>
Ashchurch T3 E = 14.3 ha of employment land	Option taken forward because it provides a strategic allocation close to the motorway junction, which aligns with the emerging LEP strategy and offers an opportunity to build and strengthen the existing employment offer in this location. <i>Included in the draft JCS 2013 as Policy A9 – Ashchurch Strategic Allocation.</i>

- 7.83 Each of the strategic options taken forward into the Draft JCS was refined and presented as Allocation Policies A1 to A 9, together with Policy SA1 that sets out the requirements for all strategic allocations. Any changes made to the proposed allocations since the SA of Options for Strategic Allocations were subject to SA and the findings are reported later in this Section 7 (paragraphs 116-118):

Joint Core Strategy Policies (Strategic, Core, Allocation and Delivery)

- 7.84 The following paragraphs present a summary of findings for the SA of the JCS Policies taken forward in the Draft JCS 2013. The policies are arranged under the following headings as they are set out in the plan: Strategic Policies; Core Policies; Allocation Policies; and Delivery Policies. Detailed sustainability appraisals are provided in Appendix IX of this SA report.

Strategic Policies

POLICY SP 1 – SCALE OF NEW DEVELOPMENT

- 7.85 The Policy is likely to lead to significant positive effects on the SA Objectives of Economy and Housing as the Policy makes provision for both new housing and land to support new jobs. The Policy directs new development into existing urban areas, urban extension and strategic allocations and as a result it is expected to lead to minor positive effects on the majority of SA Objectives. With the protection and/or mitigation provided by other JCS Policies, the policy is expected to have neutral effects on Climate Change Adaptation and Historic Environment.

POLICY SP 2 – DISTRIBUTION OF NEW DEVELOPMENT

- 7.86 The Policy sets out the broad locations and the level of new development that will be distributed in those broad locations. The main focus is on existing settlements including Cheltenham, Gloucester, Tewkesbury Town and a number of Rural Service Centres and Villages. As a result the effects identified are similar to those identified for Policy SP 1 with significant positive effects for Housing and the Economy and minor positive effects on the majority of other SA Objectives. All the main urban areas of Cheltenham, Gloucester and Tewkesbury suffer from flooding issues with Cheltenham also having particular sensitivities with regard to air quality and heritage and any development must be carefully managed here using the other JCS Policies including S 2, S 6 and S 8.

POLICY SP 3 – DELIVERY & REVIEW

- 7.87 The aim of the Policy is to require that the three Councils review the Joint Core Strategy at regular intervals to ensure that this strategy will be delivered and that it continues to meet the needs of the area. Through ensuring that the plan is implemented effectively, it is likely to improve the certainty of the plan's effects on the environment and socio-economic factors.

Core Policies

Ambition 1 – A Thriving Economy

POLICY E 1 – EMPLOYMENT

- 7.88 The policy is supportive of many of the SA Objectives with no negative effects being identified. The policy is likely to have minor positive effects on most SA Objectives including: Climate change; Flooding; Natural Environment; Sustainable Transport; City and Town Centres; Equality; Safety; Health and Culture and Tourism. In particular, it was considered likely to have a major positive effect on the Economy given the main thrust of the policy is to encourage development that will lead to further employment opportunities. Positive synergistic effects were found likely with regard to Economy and City and Town Centres when the policy is combined with Policy E 2.

POLICY E 2 – ENSURING THE VITALITY AND VIABILITY OF CENTRES

- 7.89 The policy is likely to have major positive effects on the SA Objective of City and Town Centres. No negative effects have been identified. It is also considered to support other SA Objectives including: the Economy; Education

and Skills; Housing; and Culture and Tourism. Positive synergistic effects were identified when combined with other JCS Policies including: E 1; S 3; and S 4. Recommendations were made to improve the certainty of and strengthen the positive effects identified, including:

- Consideration should also be given to mentioning community uses as development which contributes to the vitality and viability of centres. This could lead to direct positive effects on the SA Objectives of Sustainable Communities and Health.
- It is recommended that an emphasis to promote competitiveness of the centres is inserted. As part of this, individuality as well as providing choice and diversity of uses is important in creating a viable centre.

Ambition 2 – A Sustainable Natural and Built Environment

POLICY S 1 – PRESUMPTION IN FAVOUR OF SUSTAINABLE DEVELOPMENT

- 7.90 This is a standard policy which supports the intention for sustainable development as set out in the National Planning Policy Framework (2012) and as a result it is likely to have a minor positive effect on all SA Objectives.

POLICY S 2 – FLOOD RISK MANAGEMENT

- 7.91 The policy is supportive of many of the SA Objectives with no negative effects identified and minor positive effects found for Historic Environment; Waste and Pollution; Economy; Housing; Green Space; Education; Sustainable Transport; City and Town Centres; Safety; Health and Culture and Tourism. In particular, the Policy was considered likely to have major positive effects on Biodiversity, Climate Change Adaptation and Flooding given its main focus on reducing flood risk and the use of Sustainable Drainage Systems (SuDs). Positive synergistic effects were found likely with regard to Biodiversity when the policy is combined with Policy S 9 and Policy S 10.

- 7.92 Uncertain effects were identified for Natural Environment and Resources quality in particular in relation to water quality. It was proposed that consideration should be given to making the policy more robust by recognising the interconnectedness of all elements of the water environment rather than just considering flood risk. It was recommended that greater protection should be given to groundwater quality (groundwater protection zones, groundwater drinking protected areas) and surface water quality (surface drinking water protected areas) from development. Also development, in particular large scale development, should contribute to meeting with the objectives of the EU Water Framework Directive in line with the Severn River Basin Management Plan.

POLICY S 3 – SUSTAINABLE DESIGN AND CONSTRUCTION

- 7.93 The policy is supportive of most of the SA Objectives with no negative effects identified and minor positive effects. Positive synergistic effects were found likely with regard to Housing and Flooding when the policy is combined with Policies C 1 – 3, S 2 and S 10.
- 7.94 A recommendation was put forward for Climate Change Mitigation which may lead to major positive effects on this SA Objective if implemented and

improve the certainty of the minor positive effects. It was suggested that consideration should be given to increasing the percentage of the energy demand to be obtained from low carbon or renewable sources (greater than 10%) or to change the wording to require 'at least 10%' of the energy demand to be obtained from low carbon or renewable sources. Larger scale development offers greater possibilities for delivering reduced carbon emissions and increased energy efficiencies. The 10% figure is featured in both BREEAM and Code for Sustainable Homes as a minimum to get points for the energy/ CO₂ category. Under the Planning and Energy Act 2008, LPAs may impose reasonable requirements for a proportion of energy used in development in their area to be energy from renewable sources and/ or low carbon in the locality of the development. In addition, the SA recommended that wording is inserted to require development to comply with energy efficiency standards that exceed the energy requirements of building regulations.

- 7.95 Uncertain effects were identified with regard to a number of SA Objectives as a result of how the standards and levels of both BREEAM and Code for Sustainable Homes are achieved. For some environmental categories there are minimum standards which must be achieved and other categories are optional and therefore the certainty of positive effects is reduced. Therefore, a recommendation was made by the SA to include a requirement for all major development to be accompanied by an environmental management plan (EMP). If implemented the EMP could help: a) improve the certainty of positive effects of many other SA Objectives including Biodiversity, Climate Change Mitigation, Natural Environment and Resources Use; b) achieve certainty of positive effects on Landscape and Soil, Safety, Health and Pollution; and c) mitigate any negative effects for transport and heritage assets, particularly during the construction phase.
- 7.96 The SA also suggested that consideration could be given when deciding on a definition for major development as this could affect the certainty of the positive effects identified.

POLICY S 4 – DESIGN REQUIREMENTS

- 7.97 The policy is likely to have major positive effects on the SA Objectives of: Green Space; Safety; Equality; and Sustainable Transport as the policy focuses on the social aspects of design rather than economic and environmental. The Policy is also supportive of 9 other SA Objectives with minor positive effects including: Culture and Tourism; Housing; Health; City and Town Centres; Economy; Historic Environment; Natural Environment and Resources Quality; Climate Change Adaptation; and Biodiversity. Positive synergistic effects were identified for Housing, Health, Sustainable Transport, Historic Environment and Natural Environment and Resources Quality when the Policy is combined with other JCS Policies. No negative environmental effects were identified.
- 7.98 A number of recommendations were made by the SA to improve the certainty of and strengthen the positive effects identified, including:
- It was recommended that this policy should be expanded to include all development and not just 'major development.' The majority of the key

design principles are applicable to smaller developments even those of a single dwelling. This will increase the positive effects for the majority of the SA Objectives including Biodiversity.

- Consideration should be given to clarifying what is meant by 'changing requirements' perhaps inserting the wording changing economic, social and environmental requirements. This would help increase the certainty of positive effects.
- Careful consideration will need to be given when deciding on a definition for major development as this could affect the certainty of the positive effects identified.

POLICY S 5 – GREEN BELT

- 7.99 The policy is unlikely to lead to significant positive or negative effects as it is supportive generally only of those SA Objectives which form part of the purposes of the Green Belt - Green Space, Biodiversity and the Natural and Historic Environment. Minor positive effects were found for the Economy as the policy seeks to support the growth of two developments located in the Green Belt – Gloucester Airport and Cheltenham Racecourse. However, the loss of the Green Belt land from development of the Safeguarded Areas will ultimately lead to negative effects, particularly as the land to the West makes a significant contribution to the Green Belt.⁸⁰ Mitigation for this area provided by other JCS Policies is therefore unlikely to reduce or prevent all negative effects and there are likely to be residual minor negative effects on SA objectives relating to the Green Belt.

POLICY S 6 LANDSCAPE POLICY

- 7.100 This policy is likely to have major positive effects on the SA Objectives of Natural Environment and Resources Quality given that it provides a robust set of requirements to ensure that landscape character is protected and enhanced and ensures that development takes account of visual impacts. The policy was also found to support with minor positive effects the following SA Objectives of: Biodiversity; Historic environment; Green Space and Culture and Tourism. Some positive synergistic effects on Historic Environment and Natural Environment and Resources Quality were found when the policy is combined with other JCS Policies including S 4, S 8 and S 10. No negative effects found. Consideration will need to be given when deciding on a definition for major development as this could affect the certainty of the positive effects identified.

POLICY S 7 – COTSWOLD AONB

- 7.101 This policy is unlikely to have significant positive or negative effects; similarly to the Policy on the Green Belt, it was found that the policy was generally only supportive of those SA Objectives which form part of the special qualities of the AONB - Green Space, Biodiversity and the Natural and Historic Environment. Neutral effects were identified for all other SA Objectives.

⁸⁰ Amec (September 2011) Gloucester City Council, Cheltenham Borough Council and Tewkesbury Borough Council, Joint Core Strategy, Green Belt Assessment. Online at <http://www.gct-ics.org/Documents/EvidenceBase/JCSGBReviewFinalSept2011.pdf>

POLICY S 8 – BUILT AND HISTORIC ENVIRONMENT

- 7.102 This policy is likely to have major positive effects on the SA Objective of Historic Environment as it provides a robust set of requirements to protect and enhance the heritage assets. It is also supportive with minor positive effects on the following SA Objectives of: The Economy; Sustainable Transport; and Culture and Tourism. In addition, positive synergistic effects were identified when the policy is combined with Policy S 6. No negative effects were identified.
- 7.103 Recommendations were made from the SA to increase the certainty of positive effects on the Climate Change Adaptation and Culture and Tourism:
- With reference to Climate Change, it was suggested that consideration could be given to inserting a requirement to ensure that where heritage assets are to be redeveloped, they are to be made adaptable to the consequences of climate change and this is likely to lead to minor positive effects
 - With reference to Culture and Tourism, it was suggested that consideration should be given to inserting 'cultural assets' into the Policy wording.

POLICY S 9 – CONSERVATION AND IMPROVEMENT OF BIODIVERSITY

- 7.104 The policy is likely to have major positive effects on the SA Objective of Biodiversity only with no significant negative effects identified. Minor positive effects were identified for: Climate Change Adaptation; Flooding; Health and Culture and Tourism. Uncertain effects were identified for Green Space and to improve the certainty of positive effects, it was recommended that consideration could be given to creating greater access for local people to experience their local biodiversity and geodiversity assets. This would also have positive effects on Education and skills, Health and Culture and Tourism.
- 7.105 The SA found an apparent contradiction between the requirements of the first paragraph and the second (3rd bullet) with regard to the enhancements of biodiversity and geodiversity assets. The SA recommended that the wording 'if possible' is removed from the 3rd bullet of the second paragraph of the policy to ensure the certainty of the major positive effects on Biodiversity.

POLICY S 10 – GREEN INFRASTRUCTURE

- 7.106 This policy is likely to have major positive effects on the SA Objective of Green Space and Biodiversity and no negative effects were identified. The policy provides clear provisions to protect and enhance green infrastructure and as a result will have minor positive effects on a number of other SA Objectives including: Natural Environment and Resources Quality; Equality; Health; Climate Change Mitigation and Adaptation; Flooding; Sustainable Transport; Economy; City and Town Centres; and Culture and Tourism. Positive synergetic effects were found for a number of SA Objectives if the policy is combined with other Core Policies S 4, C 5 and C 6. The SA recommended that consideration should be given to linking the policy to the GI Strategy to provide further clarification as to what GI is and what GI assets are considered to be strategic and what ones are considered to be local.

POLICY S 11 – RENEWABLE ENERGY/ LOW CARBON ENERGY DEVELOPMENT

- 7.107 The policy is likely to have major positive effects on the SA Objective of Climate Change Mitigation as it seeks to support renewable/ low carbon energy development which will inevitably help reduce carbon emissions. The effects upon the SA Objective on Economy is likely to be minor positive as the development of this type is likely to lead to several economic benefits mainly through providing additional employment opportunities and contributing to the green economy. The effects on all other SA Objectives are considered to be neutral either because they are not affected by the Policy or because any negative effects are likely to be mitigated by other JCS Policies.

Ambition 3 – A Healthy, Safe and Inclusive Community

POLICY C 1 – RESIDENTIAL DEVELOPMENT

- 7.108 The policy seeks to encourage housing development on previously developed land and puts strict requirements in place for proposals permitted on Greenfield land. It was considered to be supportive with minor positive effects of a number of SA Objectives including: Natural Environment and Resources Use; Sustainable Transport; Safety; and Housing.
- 7.109 A potential negative effect was identified because the 4th bullet of the second paragraph refers to allowing the infilling of development within the existing built up areas of villages, to meet local housing need. The SA considered that this could be in direct conflict with the requirements of two other JCS Policies S 10 and S 4. For example, if the area of infill land provides open space/ GI for existing development, the policy suggests that open space or GI could be removed if there a local housing need has been identified. Therefore, the SA recommended that the 4th bullet is re-worded to remove the conflict which would result in the policy have neutral effects of the SA Objective of Green Space.

POLICY C 2 – HOUSING MIX AND STANDARDS

- 7.110 The policy seeks to secure a range of different types of homes which meets the needs of the population in the JCS area. This should reduce inequalities in wellbeing and opportunity as it should increase access and meet the residential requirements of all people in the JCS area. Therefore it is likely to lead to major positive effects on SA Objectives for Equalities and Housing. No negative effects were identified with effects on all the other SA Objectives being considered to be neutral.

POLICY C 3 – AFFORDABLE HOUSING

- 7.111 The policy seeks to secure a mix of affordable homes which meets the needs of the population in the JCS area. This should reduce inequalities in wellbeing and opportunity as it should increase access to homes for all people in the JCS area. Therefore it is likely to lead to major positive effects on SA Objectives for Equalities and Housing. With regard to the certainty of the positive effects, the SA noted that the policy only applies to development sites where there is a net gain of 5 houses or more. As a result of this threshold, there is a risk that parcels of land may be divided up and developed at different times to avoid meeting the threshold. Land may also not be

developed to its full potential. Re-wording the policy to reduce the risk should increase the certainty of the positive effects.

No negative effects were identified with effects on all the other SA Objectives being considered to be neutral.

POLICY C 4 – GYPSY, TRAVELLER AND TRAVELLING SHOW PEOPLE

- 7.112 The policy seeks to provide accommodation for Gypsies, Travellers and Travelling Showpeople and therefore it is supportive with minor positive effects on the SA Objectives of Housing and Equality. The effects on the majority of other SA Objectives are considered to be neutral with the exception of the effects on Economy which are considered to be uncertain. The SA suggested that positive effects on Economy could be realised if the word 'accommodation' was clarified to state whether it includes employment related development and if so this could lead to minor positive effects on the Economy. It was also suggested that the positive effects on the SA Objective of housing could be made more certain if new sites were required to be provided as part of the new Strategic Allocations rather than just requiring that provision should be considered.

POLICY C 5 – COMMUNITY FACILITIES

- 7.113 The policy is likely to have major positive effects on the SA Objectives of Health and Education and Skills. Minor positive effects were identified for the Economy, City and Town Centers, Equality and Culture and Tourism. With reference to the Economy, the SA recommended that the wording in the policy should be amended to make it apply to all types of development which would strengthen the policy and increase the certainty of the positive effects - community facilities are also important for non-residential development, for example; in particular, crèche provision and youth clubs can assist parents going to work.
- 7.114 No significant negative effects were identified; however uncertain effects were identified for the SA Objective on Green Space. The SA suggested that consideration should be given to including open spaces in the definition of community facilities. Open space is a vital asset which can also improve the health of the community through encouraging recreation and exercise. Amending the definition would strengthen the policy and could increase the certainty of major positive effects for Health and Green Space. Positive synergistic effects on Equality and Health were found when the policy is combined with Policies S 4 and C 5.

POLICY C 6 – SUPPORTING HEALTHY LIFESTYLES AND WELLBEING

- 7.115 The policy is likely to have major positive effects on the SA Objectives of Green Space and Pollution with no negative effects identified. Minor positive effects were identified for: Health, Equality, Sustainable Transport; Natural Environment Quality; Climate Change Adaptation; and Safety. Positive synergistic effects were identified for Equality, Safety and Health when the policy is combined with S 4 and C 5.
- 7.116 A number of recommendations made by the SA to strengthen the policy and ensure the certainty of positive effects:

- Expanding the ways in which development can adapt to climate change, for example, by inserting the word 'including' after 'climate change' and before 'through water sensitive...'
- The requirements for reducing inequality overlap with those required by C2 and C3. Consideration should be given to going above and beyond the requirements of the other two policies to ensure the certainty of the positive effect.
- Consideration should be given to recognise the role of many other ways to provide access to healthy affordable and locally produced foods including community gardens. Opening the requirements up will encourage greater innovation and also more ways to provide access leading to greater certainty of the major positive effects on Green Space.

POLICY C 7 –TRANSPORT REQUIREMENTS

- 7.117 The Policy focuses on requiring new development to provide measures to increase accessibility for all modes of transport (walking, cycling, bus and car) that is safe which leads to minor positive effects on the SA Objectives of Sustainable Transport and Safety. However, the Policy does not seek to maximise the use of sustainable modes of transport and reduce the need to travel by private car. The SA recommended that the policy could include measures to achieve the above and thus lead to major positive effects for sustainable transport and minor positive effects on Climate Change Mitigation, Waste and Pollution and Health (indirect). This could be achieved by linking the policy to Policy S4 part G which refers to encouraging sustainable transport. Neutral effects were identified for all other SA objectives.

Allocation Policies

POLICY SA 1 – REQUIREMENTS FOR STRATEGIC ALLOCATIONS

- 7.118 The Policy is likely to have major positive effects on Flooding and the Economy. It is also considered to progress with minor positive effects on other SA Objectives: Biodiversity; Climate Change; Natural Environment Quality; Health; Education; Green Space; and Culture and Tourism. No negative effects were identified; however, a number of recommendations were made by the SA to improve the sustainability of the policy. These included:
- It will be important to include provision for longer term management of Green Infrastructure (GI), perhaps through various funding mechanisms and/or community/residents groups - if not already included in the GI Assessment required under Policy D 2.
 - It was noted that overlaps with the requirements of other Policies such as S 9 and S 10 should be removed.
 - Consideration should be given to removing 'where appropriate' in bullet point D (iv) as this would ensure the certainty of positive effects on Biodiversity.
 - Larger scale development offers greater possibilities for delivering reduced carbon emissions and increased energy efficiencies and therefore it was suggested that the percentage of onsite renewable/ low carbon energy is increased. The 10% figure is featured in both BREEAM and Code for Sustainable Homes as a minimum to get points for the energy/ CO₂

category. This suggestion had also been made for S 3 for other large scale development.

Policies A1 to A9

- 7.119 Policies A1 to A9 comprise the options for strategic allocations brought forward into the Draft JCS and as set out previously in Table 7.2. Each of these strategic allocations was assessed, taking into account mitigation provided through an early draft of Policy SA 1 (details provided in Appendix VIII of this SA Report). Other JCS Policies were not available at the time of the assessment. Since the SA of Potential Strategic Allocations was undertaken and recommendations made, a number of refinements were made to the Strategic Allocations and other relevant Policies, including:
- JSC Policies have been developed which cover various environmental issues including historic environment, biodiversity and landscape etc. These policies provide general requirements to protect and/or enhance the environment and also provide mitigation for potential negative effects. These Policies improve upon the requirements initially suggested in the early version of Policy SA 1 and the site requirements and they also capture many of the SA recommendations made (see previously paragraph 7.81).
 - Policy D 2 requires that the development of Strategic Allocations must be supported by a number of assessments including: Ecological Assessment; Heritage Impact Assessment; A Renewable Energy Statement; Noise Assessment; Dust Assessment; and Health Impact Assessment. These assessments are additional to those set out in the early version of SA 1 and again, these capture many of the SA recommendations made.
 - Transport improvements – in every Strategic Allocation Policy, site-specific transport improvements have been incorporated.
 - Flood Storage Betterment – Flood storage betterment is required on all Strategic Allocations where as previously it was only required on a few of the sites.
- 7.120 It is likely that these refinements have affected the findings of the SA of the Strategic Allocations, with the exception of the transport improvements which are specific to the chosen Strategic Allocations included in Policies A2 to A9. It is considered that the changes above will increase certainty of positive effects (in particular for the SA Objective of Safety), reduce any uncertainty identified for all SA Objectives and/ or provide mitigation for negative effects identified. Given the requirements now of the proposed JCS policies it is likely that negative effects identified for Historic Environment, Transport and Waste and Pollution will be mitigated and lead to minor positive effects. In addition, a key change will be on the effects identified for each site on SA Objective of Flooding as the requirement for all sites to achieve flood storage betterment is likely to lead to major positive effects on Flooding for all sites. These improvements to aspects of the SA of the options taken forward as Strategic Allocations were recorded in the summary SA findings as presented in the following Table 7.3 that considers the cumulative effects of implementing the Draft JCS.

Delivery Policies

POLICY D 1 – INFRASTRUCTURE

- 7.121 The Policy seeks to ensure that all new development must be served by appropriate on-site and off-site infrastructure and services. As a result the policy is expected to support a wide range of development types and lead to minor positive effects on a number of SA Objectives including: Sustainable Transport; Economy; Flooding; City and Town Centres; Equality; Health; Housing; Green Space; Education; Culture and tourism. Any minor negative effects resulting from the development of new infrastructure are likely to be mitigated by other JSC Policies.

POLICY D 2 – ASSESSMENTS

- 7.122 The Policy requires that a number of assessments are undertaken for urban extensions, strategic allocations and for other major development. This should ensure that likely effects are identified and appropriate mitigation is put in place to reduce negative effects. As a result the Policy was considered to have major positive effects on the following SA Objectives: Biodiversity; Climate Change Mitigation; Flooding; Sustainable Transport; Waste; Health; and Green Space. Minor positive effects have been identified for Natural Resources Quality and Equality. No negative effects were identified.
- 7.123 A number of recommendations were made by the SA to help strengthen the policy and ensure the certainty of the positive effects identified:
- Careful consideration will need to be given when deciding on a definition for major development as this could affect the certainty of the positive effects identified.
 - Consideration should be given to inserting a requirement for a sustainability assessment to support the development as this will address all aspects in the SA framework in an integrated approach.
 - Insert a requirement to consider climate change adaptation measures under the renewable energy statement. This would lead to minor positive effects being realised for the SA Objective of Climate Change Adaptation.
 - Consideration should be given to requiring assessments to take account of impacts arising from all stages of new development - construction, operation and decommissioning.
 - Consideration should be given to requiring that strategic allocations, urban extensions or other major development should be screened for the need to carry out an Environmental Impact Assessment (EIA) rather than to automatically requiring that they will need one. EIA is only required when projects are likely to have significant effects on the environment and automatically requiring one to be done could hinder the development process increasing time and cost and could result in development not going ahead.

POLICY D 3 - TRANSPORT ASSESSMENTS AND TRAVEL PLANS

- 7.124 The policy requires that all new development must produce a pre-application transport assessment which considers impacts of the new development on the transport network and thus likely to have minor positive effects on the SA

Objectives of Sustainable Transport, Pollution and Safety with indirect positive effects on Health. No negative effects were identified.

POLICY D 4 - MASTER PLANS AND DESIGN BRIEFS

- 7.125 The Policy requires that proposals for residential development and major development sites will need to be accompanied by a design brief, which includes a masterplan. No negative effects were identified. Consideration of design and masterplanning of development has the potential to lead to major positive effects on Landscape and Sustainable Transport with minor positive effects on a number of the SA Objectives (Natural Resources Use, Economy, Equality, Health, Housing and Education and Training. There are however uncertain effects with regard to SA Objectives on Biodiversity, Climate Change, Flooding, Historic Environment; Waste and Pollution; Safety; Green Space; and Culture and Tourism. The uncertainty lies where they are not required to be specifically addressed by the design brief whereas other SA Objectives have been.
- 7.126 Therefore, the SA recommended that the design brief should be more closely linked to the other JSC policies (relevant to a particular development) so that it can demonstrate how mitigation, which is provided by those policies, will be implemented. This could be done by strengthening the wording in the last bullet of item iii) and this would ensure that any uncertain effects identified for particular SA Objectives will be positive. Two other recommendations were made:
- The word 'environmental' be removed from the last bullet of item iii) of the Policy. This is because term 'sustainability' is understood to include environmental matters.
 - Careful consideration will need to be given when deciding on a definition for major development as this could affect the certainty of the positive effects identified.

Cumulative Effects Assessment of Draft JCS Policies

- 7.127 The SEA Directive requires the consideration of the overall effects of implementation of the plan, including the secondary, synergistic and cumulative effects of plan policies. This approach examines effects in a holistic inter-related way and considers how incremental effects that may have a small effect individually can in some circumstances accrue to become significant.
- 7.128 Good practice SA/SEA includes the analysis of cumulative effects arising from the interactions within or between effects of the plan (intra-plan effects) as well as the combined effects that may occur with other concomitant plans and projects (inter-plan effects). The following Table 7.3 presents an overview of the effects for each Strategic Allocation proposed to be taken forward in the Draft JCS (2013). The following paragraphs provide a summary of intra and inter-plan effects, highlighting those that have the potential to be significantly positive or negative for the framework of SA objectives set for the JCS.

7.129 Table 7.3 has taken into account any changes to the effects identified by the SA resulting from refinements which relate to the Strategic Allocation Policies (A1 to A9) as explained earlier in paragraphs 7.118-120. Any changes have been clearly highlighted and a key has been provided to show the nature of the change and the identified improvements for sustainability.

Table 7.3: Draft JCS Policies (2013) Summary Cumulative Effects Assessment⁸¹

	Sustainability Objectives																	
	Biodiversity	Climate – Mitigation	Climate – Adaptation	Flooding	Resources, Landscape	Resources, Soil, water	Historic	Transport	Waste, Pollution	Economy	City, Town Centres	Communities – Equalities	Communities – safety	Health	Housing	Green Space	Education & Skills	Culture & Tourism
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Strategic Policy																		
SP 1 – SCALE OF NEW DEVELOPMENT	+	+	○	+	+	+	○	++	+	++	+	+	+	+	++	+	+	+
SP 2 – DISTRIBUTION OF NEW DEVELOPMENT	+	+	○	+	+	+	○	++	+	++	+	+	+	+	++	+	+	+
SP 3 – DELIVERY	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Core Policy																		
Ambition 1 – A Thriving Economy																		
E 1 – EMPLOYMENT	○	+	+	+	+	+	○	+	○	++	+	+	+	+	○	○	+	+
E 2 – VITALITY & VIABILITY OF CENTRES	○	○	○	○	○	○	○	○	○	+	++	○	○	○	+	○	+	+
Ambition 2 – A Sustainable Natural and Built Environment																		
S 1 – PRESUMPTION IN FAVOUR OF SD	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
S 2 – FLOOD RISK MANAGEMENT	++	○	++	++	?	○	+	+	+	+	+	○	+	+	+	+	+	+
S 3 – DESIGN & CONSTRUCTION	+	?	+	+	+	?	+	○	○	+	?	+	+	+	?	+	?	+

⁸¹ Some Policy titles have been summarised.

	Sustainability Objectives																	
	Biodiversity	Climate – Mitigation	Climate – Adaptation	Flooding	Resources, Landscape	Resources, Soil, water	Historic	Transport	Waste, Pollution	Economy	City, Town Centres	Communities – Equalities	Communities – safety	Health	Housing	Green Space	Education & Skills	Culture & Tourism
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
S 4 – DESIGN REQUIREMENTS	+	○	+	○	+	○	+	++	○	+	+	++	++	+	+	++	○	+
S 5 – GREEN BELT	+	○	○	○	+	+	-	+	○	○	+	○	○	○	○	+	○	+
S 6 - LANDSCAPE POLICY	+	○	○	○	++	○	+	○	○	○	○	○	○	○	○	+	○	+
S 7 – COTSWOLD AONB	+	○	○	○	+	+	+	○	○	○	○	○	○	○	○	+	○	+
S 8 – BUILT & HISTORIC ENVIRONMENT	○	○	○	○	+	○	++	+	○	+	○	○	○	○	○	○	○	+
POLICY S9 - BIODIVERSITY	++	○	+	+	○	○	○	○	○	○	○	○	○	+	○	?	○	+
POLICY S 10 – GREEN INFRASTRUCTURE	++	+	+	+	+	○	○	+	○	+	+	+	○	+	○	++	○	+
S 11 – RENEWABLE/ LOW CARBON ENERGY	○	++	○	○	○	○	○	○	○	+	○	○	○	○	○	○	○	○
Ambition 3 – A Healthy, Safe and Inclusive Community																		
C 1 – RESIDENTIAL DEVELOPMENT	○	○	○	○	○	+	○	+	○	○	○	○	+	○	+	○	-	○
C 2 – HOUSING MIX & STANDARDS	○	○	○	○	○	○	○	○	○	○	○	++	○	○	++	○	○	○
C 3 – AFFORDABLE HOUSING	○	○	○	○	○	○	○	○	○	○	○	++	○	○	++	○	○	○
C 4 – GYPSY, TRAVELLER, & SHOWPEOPLE	○	○	○	○	○	○	○	○	○	?	○	+	○	○	+	○	○	○
C 5 – COMMUNITY FACILITIES	○	○	○	○	○	○	○	+	○	+	+	++	○	++	○	++	++	+
C 6 – SUPPORTING HEALTHY LIFESTYLES,	○	○	+	+	+	○	○	+	+	○	○	+	+	+	○	++	○	○

	Sustainability Objectives																	
	Biodiversity	Climate – Mitigation	Climate – Adaptation	Flooding	Resources, Landscape	Resources, Soil, water	Historic	Transport	Waste, Pollution	Economy	City, Town Centres	Communities – Equalities	Communities – safety	Health	Housing	Green Space	Education & Skills	Culture & Tourism
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
WELLBEING																		
C 7 –TRANSPORT REQUIREMENTS	○	○	○	○	○	○	○	+	○	○	○	○	+	○	○	○	○	○
Allocation Policy																		
Key: Changes to effects: -uncertain effects removed - improved to major positive or uncertain effects improved to positive -minor negative effects have been mitigated and minor positive effects have been realised																		
POLICY SA 1 – STRATEGIC ALLOCATIONS	+	+	+	++	+	○	○	○	○	++	○	○	○	+	○	+	+	+
POLICY A1 – INNSWORTH and TWIGWORTH	++	++	+	++	-	-	○	+	+	++	++	++	+	++	++	++	++	○
POLICY A2 – NORTH CHURCHDOWN	++	+	+	++	-	-	○	++	+	○	++	++	+	+	++	+	+	○
POLICY A3 – SOUTH CHURCHDOWN	++	+	+	++	-	+	○	++	+	++	++	+	+	++	++	++	+	○
POLICY A4 – NORTH BROCKWORTH	++	+	+	++	-	-	+	+	+	○	+	++	+	++	++	++	++	○
POLICY A5 – NORTH WEST CHELTENHAM	+	++	+	++	-	-	+	++	+	++	++	++	+	+	++	+	++	○
POLICY A6 – SOUTH CHELTENHAM – LECKHAMPTON	+	+	+	++	--	-	+	+	+	○	++	++	+	++	++	-	++	○
POLICY A7 – SOUTH	++	+	+	++	-	-	+	++	+	○	++	+	+	+	++	+	+	○

	Sustainability Objectives																	
	Biodiversity	Climate – Mitigation	Climate – Adaptation	Flooding	Resources, Landscape	Resources, Soil, water	Historic	Transport	Waste, Pollution	Economy	City, Town Centres	Communities – Equalities	Communities – safety	Health	Housing	Green Space	Education & Skills	Culture & Tourism
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CHELTENHAM – UP HATHERLEY																		
POLICY A8 – MOD SITE AT ASHCHURCH	+	++	+	++	+	-	+	+	+	++	++	++	+	+	++	+	+	○
POLICY A9 – ASHCHURCH	++	+	+	++	-	+	○	○	+	+	++	++	+	+	○	+	++	○
Delivery Policies																		
POLICY D 1 – INFRASTRUCTURE	○	○	○	+	○	○	○	+	○	+	+	+	○	+	+	+	+	+
POLICY D 2 – ASSESSMENTS	++	++	○	++	+	○	++	++	+	○	○	○	+	○	++	○	++	○
POLICY D 3 – TRANSPORT/ TRAVEL ASSESSMENTS & PLANS	○	○	○	○	○	○	○	+	+	○	○	○	+	+	○	○	○	○
POLICY D 4 – MASTER PLANS & DESIGN BRIEFS	?	?	?	?	+	?	+	?	++	?	+	+	+	?	+	+	?	+

Key:

Categories of Significance		
Symbol	Meaning	Sustainability Effect
x	Absolute constraints	Absolute sustainability constraints to development, for example, internationally protected biodiversity
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	Minor negative	Potential sustainability issues: mitigation and/or negotiation possible
+	Minor positive	No sustainability constraints and development acceptable
++	Major Positive	Development encouraged as would resolve existing sustainability problem
?	Uncertain	Uncertain or Unknown Effects
0	Neutral	Neutral effect
- +	The SA Objectives 5, 6, 9, 13 and 14 consider more than one topic and as a result the plan could have different effects upon each topic considered. For example, Objective 6 includes a number of topics including soils, previously developed land, water use and Green Belt. A site/ policy within the plan could have a negative effect on the topic Green Belt but also have a positive effect on previously developed land and therefore this could lead to two symbols being shown.	

Cumulative Effects of the Draft JCS Policies (Intra-plan Effects)

- 7.130 The summary of potential intra-plan effects is presented below under the themes relating to the SA Objectives. The SA identified significant positive cumulative effects for the SA objectives of: Climate Change; Flooding; Natural Environment; Green Space; Historic Environment; Waste and Pollution; Biodiversity; Economy; Health; Sustainable Communities; Transport; Education and Skills; Housing; and City and Town Centres. Some cumulative negative effects were indicated since the overall quantum of development will increase greenhouse gas emissions from transport and embodied energy inherent in construction. There are likely to be cumulative negative effects in the longer term associated with the overall predicted growth in road traffic; also potential cumulative negative effects on locally important landscape arising from significant physical changes to local areas. However, mitigation measures are in place to reduce such cumulative effects.

Housing, Health and Sustainable Communities

- 7.131 Strategic Policy SP1 sets the level of homes to be provided over the plan period at 33,200. The proposed Strategic Allocations have the potential to provide approximately 15,000 across the JCS during the plan period including plots for gypsies and travellers. Plan policies such as S3, S4 and C1 -3 will ensure that a percentage of these homes are affordable, are of the right type and are of excellent quality. This should have major positive cumulative effects on housing and indirect major positive effects on health, wellbeing, equalities and safety. The increase in supply as a result of development of the Allocations could also have the effect of reducing house prices in the area.
- 7.132 Policies S3, S4, C5 and C6 ensure that new development is of the highest quality laying down design principles which require safe spaces to be made. They also make provision for additional community services and facilities including healthcare facilities, open/ green space for recreation and leisure, and better access to existing facilities through transport improvements to encourage sustain modes. Therefore the cumulative effects are considered to be major positive in the long-term on health and sustainable communities.

The Economy, City and Town Centres, and Education and Skills

- 7.133 Policy E1 sets out the requirement for provision of 21,800 jobs over the plan period focused on urban areas with provision in rural areas acceptable if the size and scale is appropriate for the surroundings. The proposed Strategic Allocations are expected to provide between approximately 83 ha of additional employment land to support the provision of jobs leading to major long-term positive effects on the economy. The Strategic Allocations are well located and benefit from good existing transport links to Cheltenham's, Tewkesbury's and Gloucester's town and city centres and therefore will support the viability and vitality of these centres. Transport improvements required as part of the all development by Policies S4, C7 and D3 as well as site-specific improvements identified for the

Strategic Allocations, will further improve connectivity to the centres and therefore increase the likelihood of significant cumulative positive effects.

- 7.134 With regard to education and skills, the provision of the employment land may provide opportunities to maintain and enhance existing skills as well gain new ones through work-based placement and/ or work provided training schemes. New development is required to make provision for community facilities or is required to make contributions to existing under Policy C5. As a result, cumulatively the effects are considered to be major positive to education and skills.

Sustainable Transport

- 7.135 The JCS area has excellent transport links with the rest of the UK, being well served with rail, motorway (M5) and strategic road connections and Gloucestershire Airport. Any increase in development in the JCS area over the plan period is likely to increase road traffic and therefore congestion, leading to negative cumulative effects on road transport. Traffic and road capacity was identified as a problem on the A4019 and A46 and in addition, traffic on the A40 and Junctions 15 and 11 of the M5⁸². Progression of Policies A1, A2 and A3 together could lead to major long-term negative effects on transport along with the progression of A7 and A8 together. However, mitigation has been provided in the Policies S4, C7 and D2 and also through transport improvements specified as part of the Strategic Allocations themselves.
- 7.136 All development is encouraged to be focused in urban areas as set out in Policy SP2; the Strategic Allocations are well located to the existing town and city centres and given their size, they are expected to improve the viability of sustainable modes of transport, particularly, bus services further out into the JCS area where in rural areas car dependency is much higher⁸³. With regard to the above, the cumulative effects on transport are expected to be positive in the long-term as betterment and enhancement of the existing transport infrastructure is expected to be achieved.

Flooding, Water Resources and Water Quality

- 7.137 Flood risk is a particular issue for the JCS area, with flood zones along the Rivers Severn and Avon and their tributaries influencing much of the sub-region. Any increase in development is likely to increase the risk of flooding through introduction of additional impermeable surfaces and therefore there is potential for major negative effects. Policy S2 seeks to ensure that all new development above a certain size will not increase flood risk through requirements to carry out Flood Risk Assessments and provide Sustainable Urban Drainage Systems; in some cases betterment of the existing situation is required. As a result the residual cumulative effects are considered to be neutral with potential to be minor positive.

⁸² Gloucestershire City Council (2011) Gloucestershire's Local Transport Plan 2011-26. Online at <http://www.gloucestershire.gov.uk/CHttpHandler.ashx?id=44146&p=0> [Accessed June 2013]

⁸³ ONS 2011 Census

- 7.138 The River Severn flows through the JCS area to the west of Tewkesbury and Gloucester. The JCS area lies within the Severn River Basin⁸⁴, which was assessed as having 29% of surface waters meet good status or better and 71% do not meet good status (621 water bodies). Of the groundwater bodies present in the river basin district 75% are at good status with the rest being poor status. Policy C6 requires that water quality should be maintained or improved with at least neutral effects and potentially cumulative positive effects in the longer term.
- 7.139 All of the proposed Strategic Allocations are located in drinking water protected areas which are considered to be 'probably at risk' and cumulatively could lead to negative effects on water quality and use. Mitigation for water use is provided by Policy S3 where minimum standards for reductions in water use are provided through the requirement for development to reach a high standard/ level for BREEAM or Code for Sustainable Homes, and Policy C6.

Climate Change Adaption and Mitigation

- 7.140 The urban areas of Cheltenham and Gloucester have emission totals well below the national average. However Tewkesbury's is higher, with much of this attributable to higher emissions from industry and road transport⁸⁵. Increased contributions to greenhouse gases are likely given the development proposals and will arise from transportation (induced traffic) and also the embodied energy inherent in construction of development leading to major negative effects on Climate Change. Mitigation has been provided in the Strategic Allocation themselves and the JCS Policies including S2, S3, S4, C7, D3, SA1 and D2 to reduce contribution to climate change and improve transport links and there could be potential opportunities for betterment of the current situation particularly in Tewkesbury.

Historic Environment

- 7.141 The JCS area is rich in historic assets and heritage designations. Policies S 7 and S8 require the protection and enhancement of heritage assets leading to major positive long-term cumulative effects on the Historic Environment. The majority of the Strategic Allocations are located in areas where there are few designated heritage assets and this has resulted in the majority having neutral effects on the Historic Environment SA Objective with mitigation of potential effects through avoidance. Where assets are present, opportunities for enhancement have been identified and reinforced by a requirement in the Strategic Allocation policy wording; thus the cumulative effects of are expected to be major positive in the long-term.

Biodiversity

- 7.142 Significant negative effects are likely to arise from the physical changes (loss of local habitats and linkages and disturbance to species) associated with the quantum of development in the plan. However, Policies S3, S9 and S10 provide

⁸⁴ www.environment-agency.gov.uk/research/planning/124941.aspx (accessed September 2013)

⁸⁵ DECC Local Authority Carbon Dioxide Figures 2010

mitigation for negative effects and promote enhancements. None of the proposed Strategic Allocations (with the exception of a small part of Policy A1), contain international, national or local nature conservation designations. Very few contain Priority Habitats identified in the Gloucestershire County Council Biodiversity Delivery Plan and where they are, recommendations have been made previously to retain these habitats and as a result, their cumulative loss is considered to be of negligible significance. Moreover, every Strategic Allocation is considered to provide the opportunity to improve and enhance biodiversity largely through the provision for large areas of green infrastructure, which generally follows and connects to existing wildlife corridors. Overall, the cumulative effects are considered to be major positive for all Strategic Allocations taken forward in the Plan.

Waste and Pollution

- 7.143 As with all development, there is potential for significant negative effects (e.g. noise, air quality reduction, pollution, congestion, loss of tranquility) during construction and also arising from the overall predicted growth in road based traffic during operation. This could have implications for human health and biodiversity from increased pollution levels and disturbance. However, appropriate mitigation, including phasing, has been provided in the Strategic Allocation Policy wording as well as in the JCS Policies S3, C5 and D2 which should result in residual negligible or minor negative cumulative effects.
- 7.144 The principal source of air pollution within the plan area is vehicular traffic. Existing traffic and congestion problems have been referred to above under the heading of Sustainable Transport and sites which may exacerbate problems cumulatively have been identified. Of particular importance to air quality are the Allocations which fall within AQMAs. Strategic Allocations A5 – A7 either fall within or are adjacent to the Cheltenham AQMA which was originally designated in 2008 and then updated in 2011 to include the whole of the Borough⁸⁶. Given the poor baseline air quality in Cheltenham, development at all the allocations mentioned above could worsen air quality in the area and lead to long-term major negative effects. Again, however, appropriate mitigation has been provided in the Strategic Allocation policy wording which should result in a residual cumulative effect of minor negative.

Natural Environment and Resources: Use and Quality

- 7.145 The rural landscape of the JCS area includes the Cotswold Area of Outstanding Natural Beauty, which is present in both Cheltenham and Tewkesbury Borough Councils. The level of development proposed by the plan could lead to major negative effects on the environment. However, Policy SP2 seeks to encourage development within existing urban areas rather than in the countryside and other policies on landscape and green infrastructure to reduce the negative effects.
- 7.146 Only one Allocation (A 6) was considered to have potential for negative effects on the AONB. None of the Allocations contain any other landscape designations

⁸⁶ Cheltenham Borough Council - Air Quality: http://www.cheltenham.gov.uk/info/200075/pollution/288/air_quality

and were generally located on land of low to medium landscape sensitivity⁸⁷. However, in terms of resource use, the majority of the Allocation sites are located on Greenfield land in the Green Belt and some of the sites are considered to significantly contribute to the purposes of Green Belt.

- 7.147 The cumulative loss of this Green Belt land, in particular between Cheltenham and Gloucester (A1, A2 and A3), could lead to major negative long-term effects. In addition, development on most of the Allocations will result in the loss of agricultural land leading to possible implications on future food production, however, the loss is considered, even cumulatively, as being of minor significance as the quality of the agricultural land across most of the Allocations is relatively poor (grade 3 and below).

Green Space

- 7.148 The level of development proposed by the plan does have the potential to lead to significant effects on Green Space through loss of open space especially within urban areas. Mitigation is provided to a certain extent by Policies C6, S4 and S10. Although development at the majority of Strategic Allocations will directly result in the loss of Greenfield agricultural land, they do provide opportunities to enhance existing green infrastructure assets such as public rights of ways. Moreover, all the allocations set aside a large amount of space for green infrastructure including landscape buffers which opens up what was inaccessible private agricultural land to the public. As a result it is considered that cumulatively there will be indirect positive effects on human health and also biodiversity - overall the cumulative effects on green space are considered to be minor positive primarily through increased provision and accessibility.

Culture and Tourism

- 7.149 A number of the JCS Policies were assessed to positively contribute either directly or indirectly to the SA Objective of Culture and Tourism. Combined it is envisaged that they could lead to indirect positive cumulative effects due to improvements in biodiversity, green infrastructure (in particular public rights of way) and enhancement of heritage assets to draw in outside and local visitors.

Interactions with Other Relevant Plans, Programmes and Projects (Inter-plan Effects)

- 7.150 The plans and programmes review prepared for the SA/SEA scoping and progressively updated through the course of the appraisal process, provides the foundations for considering how the developments proposed by the JCS may interact with other plans. When appraising the potential in combination effects with other plans and projects, priority has been given to those documents that particularly affect and influence planning and development in the JCS area. This includes other local development frameworks, transport/ infrastructure plans,

⁸⁷ Gloucester City Council, Cheltenham Borough Council and Tewkesbury Borough Council (2013) Joint Core Strategy Landscape Characterisation Assessment and Sensitivity Analysis (Draft)

economic development, and community strategies. The plans considered reflect the documents most relevant to a strategic level appraisal.

- 7.151 In developing the JCS Policies, the Councils have been informed by an extensive evidence base that includes technical reports and background papers in the areas of housing, the environment, the economy and communities as well as consultation feedback⁸⁸. As a result considerable progress has been made in mitigating the potential negative effects that may arise from the development in the JCS area and in particular development of the Strategic Allocations. The summary of potential inter-plan effects presented in the following Table 7.4 illustrates the key interactions with other key plans and programmes.

Table 7.4: Significant Cumulative Effects (Inter-plan)

Plans & Programmes	Significant Effects arising from implementation of the JCS when combined with the effects of other plans and programmes
Neighbouring Local Development Frameworks (South Worcestershire, Stroud, Forest of Dean and Cotswold)	<p>Positive Effects</p> <ul style="list-style-type: none"> ■ Improved housing provision, including affordable housing for population living/ migrating within the JCS area. ■ Enhanced economic regeneration with a locally specific emphasis (rural businesses, technology belt industries, city centre retail and service provision). <p>Negative Effects (mitigated by Spatial & Development Management Policies)</p> <ul style="list-style-type: none"> ■ Increased pressures on Green Belt, open/green space and biodiversity assets from recreation, disturbance and direct development. ■ Overall growth in greenhouse gas emissions from a growth in traffic/transport and emissions from the built environment. ■ Impacts for water environment (and dependant biodiversity), through demand growth. ■ Increase overall in coverage of impermeable services, with potential contributions to flood risk in the long term.
Community Strategies (The Sustainable Community Strategy for Tewkesbury Borough 2008 – 2028 (Refreshed November 2010); Cheltenham Sustainable Community Strategy: Our	<p>Positive Effects</p> <ul style="list-style-type: none"> ■ Improved delivery of neighbourhood level community services and facilities including extra facility provision. ■ Cumulative benefits for health and equality aims, through improvements to access/ provision of facilities. ■ Enhance community cohesion through increased availability of affordable homes.

⁸⁸ Evidence base publications and background papers can be viewed at <http://www.gct-jcs.org>

Plans & Programmes	Significant Effects arising from implementation of the JCS when combined with the effects of other plans and programmes
Cheltenham, Our Future, 2008–2011 and Sustainable Community Strategy for Gloucester, 2008 - 2018)	
Gloucestershire Local Transport Plan 3 Gloucestershire County Council	Positive Effects <ul style="list-style-type: none"> ■ Incremental improvements to sustainable transport networks (increased rail passengers, bus route improvements in market towns, cycle and pavements development in urban areas). ■ Reduced congestion (new park and ride facilities), improvements to motorway junctions and other road junctions.
The Gloucestershire Integrated Economic Strategy 2009 - 2015	Positive Effects <ul style="list-style-type: none"> ■ Promotion and development of Gloucestershire's distinctiveness, positive effects for learning, innovation & skills industries, supporting economic growth and employment objectives. ■ Retention of skilled/ young people through cumulative support for education/ training facilities and improvements in economic opportunity. ■ Support for tourism and leisure opportunities and facilities, building on the protection and enhancement of cultural and natural environmental assets.
A Local Delivery Plan for Biodiversity: a new framework for delivering Priority Habitats and Species in Gloucestershire	Positive Effects <ul style="list-style-type: none"> ■ Biodiversity improvement through protection and enhancement of green corridors and creation of green infrastructure. ■ Health benefits creation of public green spaces which people can access for leisure and recreation.

Equality & Diversity Impact Assessment (EqIA) 2013

- 7.152 Consideration of effects on equality, health and diversity has been made throughout the SA process. All aspects of the Draft JCS have been assessed against a SA framework which contains several objectives that directly and indirectly link to equality, health and diversity. Nonetheless, a separate, detailed Report has been produced to demonstrate the Councils' compliance with the Equality Act 2010 and this can be found in this SA Report at Appendix X.
- 7.153 The Report outlines the process and results of a screening assessment for an Equalities and Diversity Impact Assessment (EqIA) of the Gloucester, Cheltenham and Tewkesbury Draft Joint Core Strategy (JCS). Public authorities such as Gloucester City, Cheltenham Borough and Tewkesbury Borough Councils under

the Equalities Act 2010, must in the exercise of their functions, have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct that is prohibited by or under the Act.
- Advance equality of opportunity between people who share a characteristic and those who do not share a characteristic.
- Foster good relations between people who share a characteristic and those who do not share a characteristic.

- 7.154 An EqIA is a tool which seeks to improve the work of the Councils and ensure they meet the requirement of the Equalities Act 2010. It seeks to help reduce inequality in all forms where land use planning is concerned. This can include inadequate provision of and access to services (health, food stores, and education facilities), good quality homes, employment opportunities, a healthy living environment and transport infrastructure (roads, pavements, public transport) for all member of society.
- 7.155 The development of the JCS has been influenced by a number of other plans, programmes and assessments relating to the protected characteristics or persons under the Equality Act 2010 and the JCS itself contain an objective which specifically relates to addressing social inequality and inclusivity, and providing for healthier and safer communities.
- 7.156 The Vision, Strategic Objectives, Distribution Strategy and the Core Strategy Policies have been assessed to the same level of detail, taking into account the baseline information gathered to establish any potential impacts on the protected characteristics or persons identified under the Equality Act 2010. The assessment found that the all of the components of the plan will lead to positive effects on the protected characteristics with no negative effects being identified.
- 7.157 A few enhancements have been suggested to strengthen the draft JCS and increase the certainty and also the breadth of the positive effects identified for all protected characteristics. These include:
- The third paragraph relating to character and identity could be improved to address the needs of all protected characteristics. This can be done by amending the third paragraph of the Vision to read 'the character and identity of individual communities will have been retained while improved access to housing will have addressed the needs of **[all including]** the needs of young families, single people and the elderly.
 - Giving consideration to requiring that all proposals for major development are accompanied by a Sustainability Assessment which should include consideration of equality and diversity.
- 7.158 A number of reports are already produced on an annual basis that includes consideration of equality, health and diversity within the JCS area. The Draft JCS also provides a further monitoring framework that addresses equality, health and

diversity through assessing the delivery of the JCS against its' strategic objectives and policy targets. Therefore, further monitoring regarding equality and diversity is not considered to be required.

- 7.159 The equalities impact assessment has found that the Draft JCS is unlikely to have negative effects on protected characteristics or persons identified under the Equality Act 2010 and as a result a full EqIA will not be required.

Habitats Regulations Assessment (HRA) 2013

- 7.160 The Conservation of Habitats and Species Regulations 2010 (as amended) [the Habitats Regulations] require that HRA is applied to all statutory land use plans in England and Wales. The aim of the HRA process is to assess the potential effects arising from a plan against the nature conservation objectives of any site designated for its nature conservation importance. The HRA process for the plan began in 2011, when a high level Habitats Regulation Scoping Assessment Report was produced and published in April 2011. The report concluded that it was not possible to make precise judgments about the likely significant effects of the JCS at that stage given the lack of policy detail available. The report was updated to take account of consultation comments and a final version was published in July 2011.
- 7.161 Building on the findings of the Habitats Regulation Scoping Assessment Report (July 2011) further screening assessment work was undertaken for the Preferred Option Consultation Document. The work was presented in an HRA Screening Report that accompanied the Preferred Option Consultation Document on a six week consultation in December 2011. The JCS vision, strategic objectives, strategic development management policies and a number of spatial development scenarios were considered through the screening assessment. The HRA Screening of the JCS Preferred Option Consultation Document assessed that likely significant effects on the integrity of certain European sites for each of the development scenarios could not be ruled out, either alone or in-combination.
- 7.162 Further work has been carried out on the JCS and there is now more detail in provided in terms of the scale and location of proposed development. Building on the findings of the previous HRA Reports further HRA screening work is being carried out on the Draft JCS to assess the potential impacts arising from the plan and if these are likely to have significant effect on European sites. There are two European sites with the plan area and a further ten sites in the surrounding area that are considered to lie within the potential influence of the plan.

European Sites within the JCS area

Cotswolds Beechwoods SAC
Dixton Woods SAC

European Sites outside the JCS area

Bredon Hill SAC
Downton Gorge SAC
Lyppard Grange SAC
River Wye SAC
River Usk SAC
Rodborough Common SAC
Severn Estuary SAC/SPA/Ramsar
Walmore Common SPA/Ramsar
Wye Valley and Forest of Dean Bat Sites SAC
Wye Valley Woodlands SAC

HRA Screening

- 7.163 The screening found that for the majority of the European sites, there were unlikely to be any significant effects alone as a result of the Draft JCS. However, uncertainty was identified with regard to short range atmospheric pollution impacts alone on the Cotswold Beechwoods SAC. Furthermore, the screening also identified uncertainty with regard to the potential for significant in combination effects on seven European sites as a result of changes to air quality, disturbance; changes to water levels and/ or as a result of changes to water quality. Based on the precautionary approach these uncertain issues in combination and for the air quality impacts on the Cotswold Beechwoods SAC alone, were considered in more detail through Appropriate Assessment (AA).

HRA Appropriate Assessment

- 7.164 The AA considered the potential for the Draft JCS to have adverse effects on the integrity of identified European sites in combination with other plan/ programs and projects through changes to air quality, increased disturbance (recreational activity) and reduced water levels and quality. It also considered the potential for adverse effects alone with regard to air quality on the Cotswold Beechwoods SAC.

Air Quality

- 7.165 The AA found that whilst existing mitigation contained in the plan should help to minimise the potential impacts on traffic and air quality, further information is needed with regard to the potential impacts of proposed development on traffic along the A46. Given the uncertainty with regard to the potential increase of traffic along the A46, it is difficult to conclude with any certainty that adverse effects on the integrity of the site will not occur alone and in combination. It was suggested the Council's undertake an assessment of the potential impacts of proposed development on traffic, particularly along the A46. The further transport assessments will help to inform future iterations of the HRA. If it is found that there is likely to be a significant increase in traffic along the A46 then further mitigation measures will be required.

Disturbance

- 7.166 The AA considered that determining the significance of increased disturbance on European sites is complex and dependent on a variety of factors including the sensitivity of designated features and the level of their exposure to recreational activities. Given the mitigation provided in the Draft JCS, in particular, the requirements to provide public open space and provide and enhance green infrastructure and also the voluntary management measures already in place, it is assessed that the Draft JCS will not have adverse effects on the integrity of European sites through increased recreational activity in combination.

Water Levels and Quality

- 7.167 The AA assessed that the mitigation provided by Draft JCS Policies and current regulatory processes (EA Review of Consents) would ensure that the potential impacts of proposed development on the water environment would be minimised. In addition two recommendations were made to improve one of the Draft JCS Policies and to improve the current baseline to provide further evidence to demonstrate that there are unlikely to be any significant effects with regard to water levels and quality:

- It was recommended that Policy S2 is strengthened to recognise the interconnectedness of all elements of the water environment rather than just considering flood risk. Also development, in particular large scale development, should contribute to meeting with the objectives of the EU Water Framework Directive in line with the Severn River Basin Management Plan.
- In addition to the Infrastructure Development Plan, it was recommended that a water cycle study is carried out to fully assess the impacts of the plan on the water environment as a whole in combination with other plans and programmes.

- 7.168 Given the mitigation provided by Draft JCS Policies, current regulatory processes (EA Review of Consents) and taking into account the recommendations above, it is assessed that the Draft JCS will not have adverse in-combination effects on the integrity of the identified European sites through reduced water levels or water quality.

Consultation and Further Work

- 7.169 The findings of the HRA will be subject to further consultation comments and advice from NE and wider stakeholders. HRA is an iterative process and further work will be undertaken alongside the JCS to inform its development.

8.0 SA of the Pre-Submission Draft Joint Core Strategy (2014)

Introduction

- 8.1 The Draft JCS 2013 was developed in consideration of consultation representations received and updated evidence in order to progress to the Pre-Submission JCS. Government Guidance⁸⁹ advises that updating to the SA should be considered only where appropriate and proportionate to the level of change being made to the plan. The proposed changes, deletions and additions from the Draft JCS to the Pre-Submission JCS were subject to SA screening to determine whether they would significantly affect the findings of the SA carried out in 2013. A change was considered significant if it substantially altered the JCS and/or was likely to give rise to significant effects. The findings of the SA screening of changes are set out in the following Table 8.1. Significant changes and new Policies were subject to fresh SA and the findings are presented in Appendix XI in this SA Report.

Consultation

- 8.2 Over 2,500 responses received to the Draft JCS – Consultation Document (October and December 2013) were collated and reviewed. A summary of the responses and the key points raised were highlighted and are available on the JCS website⁹⁰. The 10 representations relating to the SA of the Draft JCS 2013 have been considered in the preparation of this SA Report, informed the preparation of the Pre-Submission JCS, and are detailed in Appendix V, together with responses to the concerns raised. SA errors, gaps in baseline and clarifications have been addressed within this SA Report and as detailed in Appendix V.
- 8.3 For the 10 representations received that concerned the SA, 5 identified factual errors and clarification of baseline information in respect of detailed appraisals. These were noted with thanks and amended in this SA Report. Two respondents were concerned about the SA of the strategic options at Tewkesbury and the approach to the SA of the high level strategic approaches to distributing proposed development. Two respondents were concerned about the progression of the SA from the initial work in 2011 through to 2013 and the relationships between early Broad Locations investigations and the development of the proposed Urban Extensions and Strategic Allocations. The Environment Agency queried the baseline evidence for the SA and it has been confirmed that the River Basin Management Plan had been taken into account in the SA. No further comments were received at this stage from the other SA/SEA statutory bodies – English Heritage and Natural England.

⁸⁹ <http://planningguidance.planningportal.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/sustainability-appraisal-requirements-for-local-plans/>

⁹⁰ <http://www.gct-jcs.org/>

Plan Changes, Deletions and Additions

- 8.4 The Pre-Submission Draft JCS document has taken forward and refined the core policies and strategic site locations in the 2013 Draft JCS. The policies have been updated and clarified variously as a result of the current situation and baseline evidence, the findings of the SA, and in consideration of the consultation responses received. The Vision and Strategic Objectives for the JCS remain essentially the same with minor amendments for clarification, particularly in the supporting text.
- 8.5 Strategic Policies SP1 and SP2 on the scale and distribution of new development have changed as a result of updated evidence for housing and employment provision. The 24 Core Policies (E1-2; S1-11; C1-7; D1-4) have been reorganised into 15 Sustainable Development Policies (SD1-15) and 8 Infrastructure Policies (INF1-8), including a new policy INF8 on Developer Contributions. The 9 Allocations Policies (A1-9) have been reorganised into one Strategic Allocations Policy (SA1) that better reflects the strategic character and purpose of such policy for the JCS; detailed site specific matters are more appropriately considered at the next levels of plan-making and SA. A number of Omission sites arising from the consultation were not appropriate for consideration through the JCA and were not subject to SA.

Screening of Changes for SA

- 8.6 The following Table 8.1 sets out a summary of the changes made to the JCS and the findings of the SA screening of changes. The table provides a commentary for each change and describes the change, deletion or addition and its likely effects with regard to the plan and the SA carried out in 2013 with its findings.

Table 8.1 - SA Screening of Changes to the JCS (2014)

Policy Number & Description	Summary of Changes, Deletions and Additions	Screening - do the changes, deletions and additions significantly affect the findings of the GCT Draft JCS SA Report (October 2013) or do they give rise to significant environmental effects?
Vision and Strategic Objectives	No change to the overall Vision for JCS; minor changes made for clarification with regard to the headline Strategic Objectives.	Not significant and findings of SA still relevant.
SP1 – Scale of New Development	Housing and employment provision has changed based on new research ⁹¹ . This work	As the conclusion of the CCHPR studies indicates that these 3 housing scenarios are reasonable alternatives, a

⁹¹ Cambridge Centre for Housing and Planning Research for GCT 'Alternative Scenarios for the Cheltenham, Gloucester and Tewkesbury Joint Core Strategy' (McDonald, N. and Whitehead, C. March 2014)

	<p>investigated 6 scenarios to reassess the 2013 provision for housing (33,200) and concluded that 3 options – B 33,200; D 30,900; and E 30,500 were “credible” in planning terms.</p> <p>The housing requirement for each authority has changed as follows (2013 figures in brackets):</p> <p>Cheltenham 9,100 (10,000) Gloucester 11,300 (13,100) Tewkesbury 10,100 (10,100)</p> <p>The employment provision was increased from 21,800 to 28,000 new jobs.</p>	<p>comparative strategic SA was undertaken in March 2014 to investigate the relative sustainability. The findings of the strategic SA of 3 housing scenarios are detailed in Appendix XII and discussed later in this Section 8.</p> <p>It was determined that Scenario E from the CCHPR studies would be progressed for the Pre-Submission JCS as it better supports the 25-34 age group that has always been of concern in the JCS area. This reflects a 2,700 reduction in housing numbers from 33,200 to 30,500 and is significant with regard to the SA. The implications of these significant changes are considered later in this table for Policy SA1; and also discussed further in this Section 8 of this SA Report with regard to cumulative effects for each authority and the overall cumulative effects of implementing the JCS.</p> <p>The changes to provision of employment land are considered later under Policy SA1 for each strategic allocation.</p>
SP2 – Distribution of New Development	<p>Distribution has changed following the updating to housing and employment provision. The housing reduction has been achieved through the deletion of one Strategic Allocation A7 South Hatherley Urban Extension; and the deletion of the Twigworth part of the A1 Urban Extension, Gloucester. The housing distribution changed to as follows:</p> <p>Cheltenham 10,500 Gloucester 10,800 Tewkesbury 9,740</p>	<p>The implications of these significant changes are considered later in this table for Policy SA1; and also discussed further in this Section 8 of the SA Report with regard to cumulative effects for each authority and the overall cumulative effects of implementing the JCS.</p>
SD1 – Presumption in Favour of Sustainable Development (Previously S1 – Presumption in	No change.	No change.

Favour of SD)		
SD2 – Employment (Previously E1 – Employment)	<p>The policy has been scaled back. Reference to the number of jobs to be supported and the amount of employment land to be provided has been removed as this repeated what was already included in other policies.</p> <p>The policy has pulled back from stating that 'planning permission will be granted' for employment uses in certain prescribed areas to stating that 'employment related development will be supported' in those prescribed areas.</p> <p>Reference to development relating to a change of existing employment use has been removed. This is governed by planning legislation.</p>	<p>The changes made reduce the certainty of the positive effects identified against SA Objective 10 – loss of the firm statement that employment uses will be granted for development in certain prescribed areas. However, it does not affect the magnitude of the effect which is still considered to be major positive.</p> <p>It is considered that all changes to the policy are unlikely to significantly affect the findings of the SA Report (October 2013).</p>
SD3 – Retail Hierarchy and Town Centres (Previously E2 – Ensuring the Vitality and Viability of Centres)	<p>Minor changes to wording to clarify areas considered to be market towns and rural service centres.</p> <p>The floorspace requirements have decreased in line with the findings of latest JCS Retail Study (March 2014)⁹²</p> <p>Recommendation made in the SA Report (October 2013) inserted with regard to mentioning residential, cultural and community uses as development which contributes to the vitality and viability of centres.</p>	<p>The changes to the policy wording have strengthened the positive effects already identified for the SA Objectives relating to Housing; Sustainable Communities; Health; and Culture.</p> <p>The changes to the floorspace are in line with the findings of the latest baseline study.</p> <p>Therefore, the changes are unlikely to significantly affect the findings of the SA Report (October 2013).</p>
SD4 – Sustainable Design and Construction (Previously S3 –)	Removal from main policy wording of levels and standards to be achieved under various construction	The changes, additions and deletions in most cases do not significantly affect the findings of the SA Report (October 2013) that already identified minor positive

⁹² DPDS Ltd (March 2014) Gloucester, Cheltenham and Tewkesbury Joint Core Strategy Retail Study 2011 – 2031, Phase 1 Update

<p>Sustainable Design and Construction)</p>	<p>methods for different types of development. However, reference is made in the supporting text to these measures and an explanation of key government targets has been given relating to design requirements; thus requirements have not been completely removed or reduced.</p> <p>Recommendation made by the SA Report (October 2013) to require all major development to be accompanied by an Environmental Management Plan (EMP). However, additional requirements (including minimising waste, adapting to climate change, improving energy efficiency, avoiding air pollution, harm to the water environment (requirements of Water Framework Directive), water efficiency and interference in other natural systems) which apply to all development including changes to existing buildings have been inserted which are at least as good as what could have been required in an EMP.</p> <p>Wording adding which refers to avoiding unnecessary sterilisation of mineral resources.</p> <p>Recommendation made by the SA Report (October 2013) has been implemented with regard to changing the requirement to ensure that 10% or more of major development's energy demand are obtained from renewable and low carbon sources.</p>	<p>effects across most of the SA Objectives. Inserting the additional environmental requirements has removed the uncertainty identified for some SA Objectives where under BREAM or Code for Sustainable Homes, developers could choose whether or not to gain credits for a particular category. This has made the policy more robust.</p> <p>However, the change of the requirement to ensure that '10% or more' of major development's energy demand are obtained from renewable and low carbon sources is likely increase the positive effects on SA Objective 3 (Climate Change Adaption) to major positive in the long-term.</p> <p>The insertion of the definition of major development provides clarification only and the wording chosen in this case does not affect the findings of the SA Report (October 2013).</p>
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	Clarification of what is meant by 'major development' in the supporting text provided in line with the suggestion made in the SA Report (October 2013).	
SD5 – Design Requirements (Previously S4 – Design Requirements)	<p>Insertion of 'where appropriate' before 'proposals for development' to the beginning of the policy.</p> <p>Minor changes to further wording to improve clarity and additions provide requirements relating to the consideration of environmental effects of development such as 'noise, smell and pollution.'</p>	<p>The additions relating to environmental requirements are likely to lead to minor positive effects on SA Objective 9 (Pollution) and also increase the certainty of positive effects that had been previously identified, in particular for SA Objectives 5 and 14.</p> <p>The insertion of 'where appropriate' reduces the certainty of positive effects across all objectives where positive effects have been identified - in particular, those where major positive effects have been identified for transport, sustainable communities and greenspace.</p> <p>Overall the changes outlined above do not significantly affect the findings of the SA Report (October 2013).</p>
SD6 – Green Belt (Previously S5 – Green Belt)	<p>Removal of Shurdington, Up-Hatherley and North East Cheltenham Green Belt changes.</p> <p>Inclusion of wording to acknowledge that the Green Belt in the JCS area is to accommodate waste management sites allocated through the Gloucestershire Waste Core Strategy.</p>	The changes to the Green Belt at Shurdington, Up-Hatherley and North East Cheltenham were only very small and as a result are not considered to significantly affect the findings of the SA Report (October 2013).
SD7 – Landscape (Previously S6 – Landscape)	Minor changes and deletion to wording in order to give the Local Planning Authority discretion in determining whether applications will require to be accompanied by a landscape and visual impact assessment.	The minor changes and deletions do not significantly affect the findings of the SA Report (October 2013). The changes and deletions reduce the uncertainty about who makes the decision to carry out a landscape and visual assessment.
SD8 – Cotswolds Area of Outstanding Natural Beauty (Previously S7 – Cotswolds Area of Outstanding)	<p>Insertion of the word 'all' at the beginning of the sentence.</p> <p>Clarification of what is meant by 'major development' in the supporting text provided</p>	It was assumed in the SA Report (October 2013) that the policy already applied to all development and therefore the insertion of 'all' is not considered to significantly affect the findings of the SA Report (October 2013). The insertion of the definition of major development provides

Natural Beauty)	in line with the suggestion made In the SA Report (October 2013).	clarification only and the wording chosen in this case, does not affect the findings of the SA Report (October 2013).
SD9 – Historic Environment (Previously S8 – Built and Historic Environment)	<p>Wording has been included that recognises the built, natural and cultural heritage of the area as opposed to just the historic environment.</p> <p>Undesignated heritage assets are no required to be considered in the same way as designated ones as appropriate to their significance.</p> <p>Proposals that will secure the future conservation of heritage assets that are at risk through neglect, decay or other threats will be encouraged.</p>	<p>The changes made to the policy increase the certainty of positive effects already identified for the SA Objectives relating to the Historic Environment, The Economy; Sustainable Transport; Green Space; and Culture and Tourism.</p> <p>Therefore, the changes do not significantly affect the findings of the SA Report (October 2013). They do however strengthen the policy.</p>
SD10 – Biodiversity and Geodiversity (Previously Policy S9 - Conservation and Improvement of Biodiversity and Geodiversity)	<p>Further statement inserted to make clear that European and Nationally protected species are safeguarded in accordance with the law.</p> <p>Removal of 'adjacent to' from the statement 'development within a locally designated site will not be permitted where it would have an adverse impact on the registered interest feature or criteria for which the site was listed...'</p> <p>Clarification added to ensure that only in 'exceptional' circumstances off-site compensatory enhancements may be acceptable.</p> <p>The two recommendations made by the SA Report (October 2013) with regard to creating greater access for local people to biodiversity assets and requirement for development to enhance</p>	<p>The changes and deletions do not significantly affect the findings of the SA Report (October 2013) where major positive effects on the SA Objective for Biodiversity had already been identified.</p> <p>Minor positive effects had also already been identified for Climate Change Adaptation; Flooding; Health; Natural Environment and Resources; Waste and Pollution; and Culture and Tourism. The changes made are considered to reinforce the likelihood of achieving the positive effects already identified but also to lead to minor positive effects against Green Space and the chance for minor positive effects against Education and Skills. This has made the policy more robust.</p>

	<p>and protect biodiversity to be made clearer and stronger have both been addressed and inserted into policy wording.</p> <p>Reference to GI has been removed although the relationship between GI and biodiversity is explained in the supporting wording for Policy S 10 – Green Infrastructure.</p>	
<p>SD11 – Residential Development (Previously C1 – Residential Development)</p>	<p>New paragraphs added which provide further clarification on the context of new residential development referring to other policies in the plan.</p> <p>The reference to 'Greenfield land' has been removed so that the requirements for any new residential development to meet now apply to all sites.</p>	<p>The changes to the policy are unlikely to significantly affect the findings of the SA Report (October 2013). There is still a preference for locating development upon Brownfield land in the policy wording and therefore this does not alter the positive effects previously identified against SA Objective 5.</p>
<p>SD12 – Housing Mix and Standards (Previously C2 – Housing Mix and Standards)</p>	<p>Clarification of what is meant by housing mix added, 'Lifetime Homes' standard no longer required but replaced by the requirement to exceed minimum space standards and further wording added with regard to requirements for specialist accommodation.</p>	<p>The changes to the policy are unlikely to significantly affect the findings of the SA Report (October 2013).</p> <p>However, the removal of the requirement for certain types of development to provide a proportion of housing that meets the 'Lifetime Homes' standards will introduce an element of uncertainty to the positive effects identified for the SA Objective relating to Health.</p>
<p>SD13 – Affordable Housing (Previously C3 – Affordable Housing)</p>	<p>Set percentages for particular developments with regard to contribution towards affordable housing have been set.</p> <p>A requirement for rural exception sites has been included to ensure that if local housing needs cannot be met elsewhere, then affordable housing will be permitted on rural exception sites.</p> <p>In line with a recommendation put forward</p>	<p>All changes increase the certainty of the majority of positive effects already identified on Equalities and Housing and as a result do not significantly affect the findings of the SA Report (October 2013).</p> <p>The policy has been successfully strengthened.</p>

	<p>by the SA Report (October 2013), wording has been inserted to state that a development site which is split into different sections or which is being delivered in different phases, will be considered as a whole to determine the appropriate affordable housing requirement.</p> <p>Links to other policies have been included.</p> <p>The requirements for testing viability have been refined.</p>	
<p>SD14 – Gypsy, Traveller and Travelling Showpeople (Previously C4 – Gypsy and Traveller Accommodation)</p>	<p>Removal of requirement that sites for Gypsy, Traveller and Travelling Showpeople should be considered as part of urban and strategic allocations. However, the supporting text states that Policy SA1 provides details with regard to site provision through the JCS which improves the certainty of provision. This amendment has been done in line with the recommendation put forward by the SA.</p> <p>Minor updates to wording with linkages provided to other policies in the JCS.</p>	<p>Inclusion of the requirement to potentially provide Gypsy, Traveller and Travelling Showpeople sites as part of strategic allocations is now provided by Policy SA1 that increases the certainty of positive effects already identified against housing as recommended by the SA Report (October 2013).</p> <p>Therefore, it is considered that the changes to the policy are unlikely to significantly affect the findings of the SA Report (October 2013).</p> <p>Changes to Policy SA1 are dealt with below.</p>
<p>SD15 – Health and Environmental Quality (Previously C6 – Supporting Healthy Lifestyles and Wellbeing)</p>	<p>The requirements of the policy have been significantly changed.</p>	<p>Given the scale of the changes a new sustainability appraisal has been carried out.</p> <p>Please refer to Appendix XI for the detailed appraisal.</p>
<p>INF1 – Access to the Transport Network (Previously C7 – Transport Requirements)</p>	<p>The Policy has been re-worded and the long list of transportation measures that proposals, where appropriate, needed to include has been removed. This long list has been replaced with a much shorter list of factors which all proposals must take account</p>	<p>The changes and deletions are considered unlikely to significantly affect the findings of the SA Report (October 2013) that already identified positive effects against the SA Objectives of Sustainable Transport, Pollution and Safety.</p> <p>Although changes have been made to</p>

	<p>of.</p> <p>The requirement for a Travel Plan to be produced in certain circumstances has been inserted into the Policy wording which was originally in Policy D3 – Transport Assessments and Travel Plans.</p> <p>Recommendation made by the SA has been partly inserted which was to encourage the use of more sustainable modes of transport.</p>	<p>the Policy to encourage the use of more sustainable modes of transport where appropriate, it is considered that it could be further strengthened if 'where appropriate' was removed to put the emphasis of the policy on encouraging the use of sustainable modes of transport rather than private car use. This would help achieve major positive effects on Sustainable Transport and minor positive effects on Climate Change Mitigation, Waste and Pollution and Health (indirect).</p>
<p>INF2 – Safety and Efficiency of the Transport Network (Previously D3 – Transport Assessments and Travel Plans)</p>	<p>Wording has been changed to explain more clearly the requirements for all development to demonstrate their impact on transport in particular congestion, safety, noise and pollution. The phrase 'pre-application transport assessment' has been removed but the requirements to assess the effects on transport are still in place.</p> <p>The requirement for a Travel Plan to be produced in certain circumstances has been removed from the key policy wording. However, the requirements of the NPPF have been explained in the supporting wording and therefore the requirement has not been lost. The requirement for Travel Plans to be produced is included in Policy INF1 instead.</p>	<p>The changes and deletions are considered unlikely to significantly affect the findings of the SA Report (October 2013) that already identified positive effects against the SA Objectives of Sustainable Transport, Pollution and Safety with indirect positive effects on Health.</p>
<p>INF3 – Flood Risk Management (Previously S2 – Flood Risk Management)</p>	<p>Minor changes to ordering of wording. A stronger requirement inserted which states that development proposals must avoid areas at risk from flooding whereas previously it had stated that the 'Councils would support development that avoid</p>	<p>The changes and additions do not significantly affect the findings of the SA Report (October 2013). The changes increase the certainty of the major positive effects already identified and the additional protection with regard to water quality, is likely to lead to minor positive effects on SA Objective 5: Natural Environment and Resources – Quality,</p>

	<p>areas of flood risk.'</p> <p>Recommendation made by the SA Report (October 2013) with regard to protecting water quality has been addressed and inserted into policy wording.</p>	<p>where the effects had previously been considered to be uncertain.</p> <p>The changes and additions have strengthened the policy.</p>
<p>INF4 – Green Infrastructure (Previously S10 – Green Infrastructure)</p>	<p>Firmer requirements for new residential development to provide additional green space in line with Policy CP5 as well as the requirement for strategic development to improve connectivity to urban areas and the wider hinterland through GI.</p> <p>Wording changed to place a firmer requirement that development should consider and contribute towards GI and that existing GI will be protected. The previous wording required that development only 'where appropriate' would protect and enhance GI.</p> <p>Specific examples of how new development should contribute towards GI have been removed and reference to ecosystems services and future management of GI have been inserted.</p> <p>Suggestion from the SA Report (October 2013) inserted with regard to clarifying what is meant by strategic and local GI assets in the supporting text.</p>	<p>The firmer requirements and word changes increase the certainty of the positive effects already identified for this policy and therefore they do not significantly affect the findings of the SA Report (October 2013).</p> <p>In addition, the insertion of the definition of local and strategic GI assets provides clarification only and does not in this case affect the findings of the SA Report (October 2013).</p> <p>Removing specific examples of how development can improve GI and referring to ecosystem services instead could have the effect of increasing the flexibility and also the potential creativity of GI solutions put forward by developers; the insertion of ecosystems services better supports Government policy and an integrated/holistic approach to planning and management of natural resources with positive effects for human health.</p> <p>Overall the changes have strengthened the policy.</p>
<p>INF5 – Social & Community Infrastructure (Previously C5 – Community Facilities)</p>	<p>The following wording has been removed 'existing community facilities have been safeguarded' from the text with the rest of the wording being changed to improve clarity.</p> <p>The requirement to provide</p>	<p>Although the requirement to safeguard existing community facilities has been removed, this has not affected the main thrust or purpose of the policy that is to provide the appropriate level of social and community infrastructure to meet the needs of everyone living in the JCS area.</p> <p>Adequate criteria to assess whether an</p>

	<p>new community facilities prior to the first occupation of new residential development has been removed.</p> <p>Recommendation made in the SA Report (October 2013) has not been implemented regarding amending the requirements to apply to all types of development which would strengthen the policy and increase the certainty of positive effects.</p>	<p>existing facility is still required are still in place and is more clearly explained although the removal of the requirement to provide new community facilities prior to the first occupation of new residential development could mean a delay in communities having access to those facilities to meet their needs. As a result, the changes and deletions are not considered to significantly affect the findings of the SA Report (October 2013).</p> <p>However, to strengthen the policy, it would be recommended (as previously suggested) that this Policy should apply to all development as appropriate, in particular, employment related development as community facilities are important for example, crèche provision and youth clubs can assist parents going to work.</p>
<p>INF6 – Renewable Energy/ Low Carbon Energy Development (Previously S11 – Renewable Energy Development)</p>	<p>Minor changes to wording and insertions such as 'cumulative impact, odour, and visual amenity' to provide examples of the nature and types of impact the JCS authorities' expected to be considered.</p>	<p>The changes and insertions only improve the clarity of the policy's requirements and therefore are not considered are not considered to significantly affect the findings of the SA Report (October 2013).</p>
<p>INF7 – Infrastructure Delivery (Previously D1 – Infrastructure)</p>	<p>Insertion of examples of infrastructure which the LPA will seek to secure the provision of with an explanation to say that the list of examples is neither exhaustive nor its elements mutually exclusive.</p> <p>The requirement for negotiation with developers to provide infrastructure and services as part of a development has been removed.</p>	<p>The insertion of the list of examples to the Policy is considered to provide clarity of requirements and has the effect of strengthening the Policy. The insertions are not considered to significantly affect the findings of the SA Report (October 2013) that already identified positive effects against a number of SA Objectives (including: Sustainable Transport; Economy; Flooding; City and Town Centres; Equality; Health; Housing; Green Space; Education; and Culture and Tourism), rather the insertions act to clarify requirements and therefore could increase the certainty of the already identified positive effects.</p> <p>The requirement for negotiation has been included as a separate Policy (INF7 – Developer Contributions and so has not been lost and the change is not considered to have a significant effect on the findings of the SA Report (2013).</p>

INF8 – Developer Contributions (New policy)	New Policy.	Significant and therefore subject to SA in 2014 - please refer to Appendix XI for the detailed sustainability appraisal.
SA1 –Strategic Allocations Policy (Previously SA1 – Requirements for Strategic Allocations)	<p>Policy has been re-drafted to remove duplication of requirements of, and mitigation provided by, the other JCS Policies; and also to provide clear linkages to other JCS Policies. In particular site specific infrastructure requirements have been removed as these are included in the GCT JCS Infrastructure Delivery Plan and this is referenced in Policy INF7. The Policy requires that proposals at each allocation must be accompanied by a comprehensive masterplan and requires that residential development should seek in all cases to retain and enhance areas of local green space within the boundary of the allocation.</p> <p>Inclusion of the requirement to potentially provide Gypsy, Traveller and Travelling Showpeople sites as part of strategic allocations.</p> <p>The policy now includes all Strategic Allocations descriptions. Changes to individual allocations have been summarised below.</p> <p>Site specific mitigation has been removed as it duplicates the requirements of and mitigation provided by other JCS Policies. This is considered more appropriate for higher level strategic plan-making for the JCS.</p> <p>The need to provide mitigation has not been lost rather the policy allows greater flexibility for the</p>	<p>The main changes remove duplication of requirements of, and mitigation provided by, the other JCS Policies and therefore they are not considered to significantly affect the findings of the SA Report 2013.</p> <p>Changes to individual allocations have been summarised and how these affect the findings of the SA Report (October 2013) have been summarised below.</p>

	<p>developer to craft ways in which to deliver mitigation based on the requirements of the plan as a whole as well as the NPPF. This also allows for more effective and creative mitigation measures to be put forward at the development management level based on more detailed surveys and assessments of the site will have been completed.</p>	
<p>SA1 –Strategic Allocations Policy</p> <p>A1 – Innsworth (Previously A1 – Innsworth and Twigworth Urban Extension, Gloucester)</p> <ul style="list-style-type: none"> ■ 1250 dwellings ■ 9.1 ha employment land 	<p>The Twigworth part of the site has been removed from the allocation. The reason for its removal related to the recognition that the flood plain split the development of the site North/South (between Twigworth and Innsworth) and therefore created difficulties in providing a comprehensive Urban Extension.</p> <p>Reduction in approximately 2318 dwellings; no change in employment land.</p>	<p>Given the scale of the changes a new SA has been carried out. Please refer to Appendix XI for the detailed appraisal.</p>
<p>SA1 –Strategic Allocations Policy</p> <p>A2 – North Churchdown (Previously A2 – North Churchdown Urban Extension, Gloucester)</p> <ul style="list-style-type: none"> ■ 530 dwellings 	<p>A decrease of 315 dwellings on the site.</p>	<p>This smaller development is likely to reduce the certainty of positive effects and may reduce the certainty of negative effects already identified against particular SA Objectives. For example, for this site, the negative effects on traffic and transport may be reduced as less traffic may be generated but the certainty of positive effects for housing may also be reduced as less housing is being provided.</p> <p>Given the previous scale considered for the development and taking into account its particular environmental sensitivities and the mitigation provided by the other JCS Policies, it is considered that the decrease will not affect the overall effects against each SA Objective. Therefore, the decrease is unlikely to significantly affect the findings of the SA Report (October 2013).</p>
<p>SA1 –Strategic Allocations Policy</p>	<p>An increase of 231 dwellings; no change in employment land on the site.</p>	<p>This larger development is likely to increase the certainty of positive effects and the certainty of negative effects</p>

<p>A3 – South Churchdown (Previously A3 – South Churchdown Urban Extension, Gloucester)</p> <ul style="list-style-type: none"> 870 dwellings 17 ha employment land 		<p>already identified against particular SA Objectives. For example, for this site, certainty of positive effects in terms the housing and economy may also be increased as more housing is being provided.</p> <p>Given the previous scale considered for the development and taking into account its particular environmental sensitivities and the mitigation provided by the other JCS Policies, it is considered that the increase will not affect the overall effects against each SA Objective. Therefore, the decrease is unlikely to significantly affect the findings of the SA Report (October 2013).</p>
<p>SA1 –Strategic Allocations Policy</p> <p>A4 – North Brockworth (Previously A4 – North Brockworth Urban Extension, Gloucester)</p> <ul style="list-style-type: none"> 1550 dwellings 	<p>A decrease of 48 dwellings on the site.</p>	<p>Given the overall scale of the original development considered by the SA Report (October 2013), the decrease in the number of dwellings is considered to be small.</p> <p>Therefore, the decrease is unlikely to significantly affect the findings of the SA Report (October 2013).</p>
<p>SA1 –Strategic Allocations Policy</p> <p>A5 – North West Cheltenham (Previously A5 – North West Cheltenham Urban Extension, Cheltenham)</p> <ul style="list-style-type: none"> 4785 dwellings 23 ha of employment land 	<p>A decrease of 44 dwellings on the site.</p>	<p>Given the overall scale of the original development considered by the SA Report (October 2013), the decrease in the number of dwellings is considered to be small. Therefore, the decrease is unlikely to significantly affect the findings of the SA Report (October 2013).</p>
<p>SA1 –Strategic Allocations Policy</p> <p>A6 – South Cheltenham Leckhampton (Previously A6 – South Cheltenham – Leckhampton Urban Extension,</p>	<p>An increase of 50 dwellings on the site.</p>	<p>Given the overall scale of the original development considered by the SA Report (October 2013), the increase in the number of dwellings is considered to be small. Therefore, the increase is unlikely to significantly affect the findings of the SA Report (October 2013).</p>

Cheltenham) ■ 1125 dwellings		
A7 – South Cheltenham- Up Hatherley Urban Extension, Cheltenham ■ 795 dwellings	Deleted. The reduction in the objectively assessed need for housing provided an opportunity to re-consider the apportionment of housing between the 3 authorities.	Significant positive effects had been identified against SA Objectives for Biodiversity, Flooding, Transport, City and Town centres and housing. The removal of this site means that opportunities to improve biodiversity, flooding and transport have been lost. The loss of housing is compensated as the overall housing need has been reduced for the JCS area. The cumulative effects of this removal of an Urban Extension have been considered through the assessment of the overall effects of the plan and discussed later in this Section 8 of the SA Report.
SA1 –Strategic Allocations Policy A8 – Mod Site At Ashchurch (Previously A8 – Mod Site At Ashchurch Strategic Allocation) ■ 2762 dwellings ■ 20 ha of employment land	No change to scale/ type of development.	No change.
SA1 –Strategic Allocations Policy A9 – Ashchurch (Previously A9 – Ashchurch Strategic Allocation) ■ 14 ha employment land	No change to scale/ type of development.	No change.
D2 – Planning Assessments	Deleted.	Requirements of this Policy have been subsumed into other policies and therefore the loss is not considered to significantly affect the findings of the SA Report 2013.
D4 – Master Plans and Design Briefs	Deleted.	Requirements of this Policy have been subsumed in to other policies and

		therefore the loss is not considered to significantly affect the findings of the SA Report 2013.
SP3 – Delivery and Review	Deleted.	The aim of the Policy was to require that the three Councils reviewed the Joint Core Strategy at regular intervals to ensure that this strategy would be delivered and that it continued to meet the needs of the area. This policy was identified to have neutral effects on all the SA Objectives in the 2013 SA and thus the deletion does not have a significant effect with regard to SA/SEA.

- 8.7 The key changes to the JCS are the decrease in overall housing provision from 33,200 to about 30,500 new houses and the increase in employment provision from 21,000 to about 28,000 new jobs. These are manifested primarily through adjustments to the strategic allocations with the deletion of part of the A1 Twigworth/Innsworth Urban Extension (reduction of about 2318 dwellings) at Gloucester and the deletion of the A7 Up Hatherley Urban Extension at Cheltenham. The revised objectively assessed need for housing allowed the reconsideration of the scale and distribution of development between the 3 authorities. There were also minor changes to housing numbers for A2 North Churchdown (decrease of 315 dwellings); A3 South Churchdown (increase 231 dwellings); A4 North Brockworth (decrease 48 dwellings); A5 NW Cheltenham (decrease of 44 dwellings); and A6 (increase 50 dwellings) with no change to the scale or type of proposed development for A8 MoD at Ashchurch and A9 Ashchurch Strategic Allocations.

Updated SA Findings for the Pre-Submission JCS

- 8.8 The change to the A1 Strategic Allocation was considered to be significant with regard to SA and a fresh appraisal was undertaken (Appendix XI of this SA Report). The minor changes to housing numbers for the Strategic Allocations A2 – A6 were not considered significant with regard to SA/SEA and the findings of the SAs reported in October 2013 are considered to be still relevant.
- 8.9 The overall decrease in housing provision and increase in employment provision is significant with regard to SA/SEA and the cumulative effects of the implementation of the JCS. This needs to be considered with the other policies in respect of sustainable development (SD1-15) and Infrastructure (INF1-8). Accordingly, the cumulative effects assessment was reconsidered and is discussed further below.
- 8.10 The policies presented for consultation in the Draft JCS (October 2013) have been reorganised for the Pre-Submission JCS to provide clarification, especially

with regard to their function as **strategic** policies – the JCS provides strategic direction for development in the wider JCS area; each Council will prepare a Local Plan for non-strategic local development and in conformity with the JCS. For example, details of site specific matters are more appropriately considered at the next level of plan-making and assessment and therefore have been replaced by general requirements. The policies have been reworded to take into account consultation responses; to avoid duplication and in consideration of updated evidence.

8.11 The SA screening found significant changes with regard to SA/SEA for new policy INF8 Developer Contributions and Policy SA1 A1 Innsworth and these 2 policies were subject to fresh appraisal. Certain policies were strengthened with regard to positive effects for sustainability, for example:

- Increasing the requirement to ensure that “10% or more” of energy demand of major development is from renewable and low carbon energy in SD4 Sustainable Design and Construction
- Changes increase the certainty of major positive effects for Equalities and Housing in SD13 Affordable Housing
- Additional reference to ecosystems services strengthens INF4 Green Infrastructure with positive effects for human health
- Changes in SD10 Biodiversity and Geodiversity reinforce likelihood of positive effects and introduce possibilities for positive effects for education

8.12 For many policies, uncertainties of the nature and significance of effects found through the SA 2013 were removed, for example:

- Additional specific environmental requirements in SD4 Sustainable Design and Construction
- Additional protection with regard to water quality in INF3 Flood Risk Management is likely to provide minor positive effects where these had been uncertain previously
- Requirement to consider provision of Gypsy, Traveller & Travelling Showpeople sites as part of Strategic Allocations in SA1 increases the certainty of positive effects for housing

8.13 For one policy, SD12 Housing Mix and Standards, the removal of a requirement regarding Lifetime Homes introduced an element of uncertainty to positive effects for health. Generally, the effects of changes were identified from the SA Screening to provide clarification and strengthening to policies. This removed uncertainties in the SA such that various positive effects that had been identified were now more certain. However, the overall effects of such minor policy changes on the implementation of the JCS are not significant from an SA perspective and the findings of the SA of the Draft JCS in 2013 are confirmed.

8.14 The reduction in housing numbers from 33,200 to about 30,500 new homes is likely to have an effect on the cumulative effects of proposed new development.

Generally, the cumulative negative effects on environmental quality and climate change from the quantum of such new development will be reduced.

- 8.15 Overall, the implementation of the policies presented in the Pre-Submission Draft JCS were found to have significant positive sustainability benefits, reflecting the iterative and ongoing inputs from the SA, the wider evidence base with updated studies, and comments received from public consultations on draft proposals. The key positive effects are summarised in the following table:

Table 8.2 - Likely Significant Positive Effects of the Pre-Submission Draft JCS

Likely Significant positive effects of the Pre-submission Draft JCS	
Relevant SA Objective	Positive Effects
Economy City & Town Centres Sustainable Communities Health Education & Skills	The JCS supports significant additional jobs in Policy SD2 with major positive effects for a range of employment opportunities focused on the urban areas with cumulative positive effects; appropriate size and scale for the rural areas. Support for economic development will have further positive effects for health and wellbeing, as well as education and skills – all contributing to more sustainable communities. The vitality and viability of existing city and town centres will also be maintained.
Climate Change Flooding Health	Flooding is a particular issue for the JCS area and Policy INF3 controls any increase in flood risk with positive effects – directly and cumulatively with regard to flooding and health risk. Renewable/low carbon energy is permitted if no adverse effects locally and this will have cumulative positive effects in the longer term.
Climate Change Natural Environment Sustainable Communities Biodiversity Green Space	The JCS sets out a strong focus on sustainable design requirements. Policies SD4 and 5 on design and construction require sustainable standards that should have positive effects overall on climate change, energy efficiencies, and includes encouragement for multi-functional benefits of green infrastructure for people and wildlife.
Biodiversity Natural Environment Historic Environment Waste and Pollution Health Green Space	Green Belt, landscape and historic assets are particular issues for the JCS and Policies SD 6-9 will limit negative effects and provide for enhancement possibilities. The JCS has a strong commitment to Green Infrastructure in INF4 with major positive cumulative effects in the long term on many sustainability factors including biodiversity and human health.

Sustainable Communities Housing Economy Health Transport	Major long term and cumulative positive effects through meeting the housing needs of the JCS area which will also support economic objectives; Policies SD11-14 provide for a range of housing for different needs and to reflect the changing population; ensuring that community facilities will be provided with both short and long term positive effects. Provision of good quality housing will have major direct cumulative positive effects on health, supported by Policy SD15 supporting healthy lifestyles and INF1 promoting sustainable transport.
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- 8.16 Alongside the positive effects, some negative effects were also identified, largely as a result of the overall, cumulative effect of increased housing, employment and associated infrastructure development in the plan area, relating to the Strategic Allocations proposed. The key negative effects are summarised in the following table:

Table 8.3 - Likely Significant Negative Effects of the Pre-Submission Draft JCS

Likely Significant Negative Effects of the Pre-Submission Draft JCS	
Relevant SA Objective	Negative Effects
Climate Change Natural Environment Transport Waste & Pollution	Increased contributions to greenhouse gases are likely given the overall amount of new development proposed and arising from transport and also the embodied energy inherent in construction (housing and employment) allocations.
Health Waste & Pollution Transport	Potential negative effects including noise, air quality reduction, pollution, congestion, loss of tranquility arising from the overall predicted growth in road based traffic. Implications for human health from increased pollution levels.
Natural Environment Biodiversity Green Space	Potential negative effects arising from significant physical changes to local areas; effects on landscape and indirect effects for biodiversity, where local level habitats and linkages disturbed or removed – cumulative in the longer term.

Updated Equality and Diversity Impact Assessment (EqIA) (2014)

- 8.17 The changes to Policy SD12 Housing Mix and Standards, introduce a minor element of uncertainty to the positive effects for health that were identified in the 2013 SA. The changes to Policy INF4 Green Infrastructure with the inclusion of ecosystem services will promote a more integrated and holistic approach to planning and management of natural resources, recognising their role in human

health and with increased positive effects. Whilst these policy changes strengthen positive effects on human health, overall the EqIA in 2013 had found that the draft JCS is unlikely to have negative effects on protected characteristics or persons identified under the Equality Act 2010. These conclusions remain valid and relevant for the Pre-Submission Draft JCS; a full EqIA is not required.

Updated Habitats Regulations Assessment (HRA) (2014)

- 8.18 Since the consultation on the Draft JCS 2013 and HRA Report (Oct 2013), there have been a number of changes made to the JCS which include new housing targets (lower than previously considered) and amended policies with more robust mitigation in relation to water quality, green infrastructure, infrastructure provision in general referring specifically to green space and environmental assets. In addition, one urban extension in Cheltenham has been removed and another in Gloucester reduced in size by almost half.
- 8.19 Further screening and Appropriate Assessment (AA) work has been carried out to ensure that the changes to the JCS have been sufficiently considered through the HRA process. This builds on the previous HRA work and is informed by consultation responses received from the statutory bodies - Natural England (NE) and Natural Resources Wales (NRW). The findings of the further HRA work are presented in a separate report and will be subject to further consultation comments and advice from NE and NRW. HRA is an iterative process and further work will be undertaken alongside the JCS to inform its development. The ongoing findings of the HRA informed the ongoing SA studies; there have been no significant changes to the findings of the HRA of the Pre-Submission JCS.

The Influence of the SA on the Preparation of the Pre-Submission JCS

- 8.20 A number of recommendations from the 2013 SA work were taken into account in the revision of the policies in the Pre-Submission JCS, for example:
- Including residential, cultural and community uses as development that contributes to the vitality and viability of centres in SD3
 - Additional environmental requirements for all major development in SD4
 - Clarification and strengthening of requirements for biodiversity and creating greater access in SD10
 - Any development site split into sections will be considered as a whole for determining appropriate affordable housing requirements in SD13
 - Additional wording to protect water quality in INF3
 - Clarification on strategic and local green infrastructure in supporting text in INF5

9.0 Monitoring Proposals

- 9.1 The SEA Directive requires that the significant effects (positive and negative) of implementing the plan should be monitored in order to identify at an early stage any unforeseen effects and to be able to take appropriate remedial action. Local Planning Authorities (LPAs) should monitor the significant environmental effects of implementing the Local Plan as required by the SEA Regulations (Regulation 17, 2004). Government guidance⁹³ on SA/SEA advises that existing monitoring arrangements should be used where possible in order to avoid duplication. Government requires local planning authorities to produce Monitoring Reports (MRs) and, where appropriate, indicators for the SA and the AMR will be linked; the monitoring results of the SA/SEA will be reported in the LPA's MR.
- 9.2 Potential targets and/or indicators for each sustainability objective were identified from the SA Framework at the scoping stage to provide a suggested list for discussion. These have been refined further to consider the significant sustainability effects of the plan, as appraised through the SA/SEA process, and by ongoing consultations with key stakeholders.
- 9.3 The proposed SA indicators and targets have been identified in the table below. These take into account consultation comments received throughout the SA process and may be further refined for the Submission JCS document. Comments and suggestions regarding these and any other potential targets and indicators, as well as possible sources of data, would be welcome.

Table 9.1: Potential Targets and Indicators

	Sustainability Objective	Potential Targets and Indicators
1	BIODIVERSITY Safeguard and enhance biodiversity and improve connectivity between green spaces and functional habitats	Target: No net loss <ul style="list-style-type: none"> Percentage of i) SSSI, ii) SAC, iii) SPA, iv) RIGS and v) Key Wildlife Sites land designated in a condition that is in favourable condition BAP Habitats Number and Area of land designated as Local Nature Reserves Percentage river length assessed as i) good ii) excellent biological quality
2	CLIMATE CHANGE MITIGATION Reduce contribution	Target: reduce CO₂ emissions by 60% across Gloucestershire by 2021 from the 2005 baseline year <ul style="list-style-type: none"> Per capita CO₂ emissions

⁹³ http://planningguidance.planningportal.gov.uk/?post_type=s&s=sustainability+appraisal+

	to climate change and support households and businesses in reducing their carbon footprint	<ul style="list-style-type: none"> ▪ Megawatts of electricity from renewable sources ▪ Developments meeting Code for Sustainable Homes Levels 4-5 ▪ Developments meeting BREEAM Excellent
3	CLIMATE CHANGE ADAPTATION Adapt to the consequences of climate change	<ul style="list-style-type: none"> ▪ Number/percentage properties at risk from flooding ▪ Development incorporating Sustainable Drainage Systems ▪ New development permitted against Environment Agency advice on flood risk
4	FLOODING Manage and reduce flood risk and surface water run-off	<ul style="list-style-type: none"> ▪ Major developments against Environment Agency advice on flood risk ▪ Development incorporating Sustainable Drainage Systems ▪ Development including rainwater harvesting
5	NATURAL ENVIRONMENT AND RESOURCES: QUALITY Protect and improve the quality of natural resources including soil, water and landscape	<p>Target: No Net Loss</p> <ul style="list-style-type: none"> ▪ Percentage of SSSI land designated in a condition that is in favourable condition ▪ Percentage river length assessed as i) good and ii) excellent biological quality ▪ Percentage river length assessed as i) good and ii) excellent chemical quality ▪ Percentage of major developments incorporating a landscape character
6	NATURAL ENVIRONMENT AND RESOURCES: USE Minimise the use of natural resources including soil, water and greenfield land through good design	<p>Target: No Loss of designated Green Belt land</p> <ul style="list-style-type: none"> ▪ Percentage of new development built on brownfield land ▪ Daily domestic water use ▪ Vacant Homes ▪ Area of land remediated ▪ Area of Green Belt ▪ No appropriate development in Green Belt
7	HISTORIC ENVIRONMENT	<p>Target: No Net Loss</p> <ul style="list-style-type: none"> ▪ Percentage of conservation areas with up-to-date character appraisals

	Protect and enhance the area's distinctive historic environment	<ul style="list-style-type: none"> ▪ Percentage of conservation areas with up-to-date management plans ▪ Number of i) listed buildings of all grades, ii) registered historic parks and gardens, iii) registered battlefields and iv) scheduled monuments ▪ Number of i) listed buildings, ii) conservation areas, iii) scheduled monuments, iv) registered battlefields and v) archaeological sites at risk ▪ Number of planning applications granted against the advice of archaeology department ▪ Number of locally indexed buildings
8	SUSTAINABLE TRANSPORT Improve accessibility, maximise the use of sustainable modes of transport and reduce the need to travel by the private car	Target: 90% residents able to access services & facilities within a 30-45 min journey time by public transport, walking and cycling <ul style="list-style-type: none"> ▪ Travel to work data: Commuting by private car ▪ Travel to work data: Working from home ▪ Travel to work data: Cycling, walking and public transport ▪ Number of Air Quality Management Areas ▪ Total road transport CO₂ emissions
9	WASTE AND POLLUTION Minimise pollution and waste to landfill	<ul style="list-style-type: none"> ▪ Domestic waste going to landfill, recycled and composted ▪ Kg waste collected per capita ▪ % household waste recycled; composted; to landfill ▪ Number of Air Quality Management Areas
10	THE ECONOMY Ensure the availability of employment land and premises to encourage inward investment and support growth of existing businesses	Targets: maintain levels close to SW and national averages; increase business start-ups <ul style="list-style-type: none"> ▪ VAT registrations/deregistration ▪ Income rank ▪ Employment gained/lost ▪ New firms as % of stock ▪ Business stock per 1,000 population ▪ % working population that is economically active ▪ % unemployed people that have been claiming for more than a year
11	CITY AND TOWN CENTRES Support the vitality and viability of city	Targets: improve on 2008 baseline for positions in national retail hierarchy <ul style="list-style-type: none"> ▪ CACI Retail Footprint ▪ Retail ranking ▪ Retail floorspace

	and town centres as retail, service, leisure and learning destinations	<ul style="list-style-type: none"> ▪ Total estimated tourism spend ▪ City Centre hotel bedstock figures
12	SUSTAINABLE COMMUNITIES Reduce inequalities in wellbeing and opportunity	Target: reduce number of Super Output Areas <ul style="list-style-type: none"> ▪ Population living in most deprived Super Output Areas ▪ Electoral vote ▪ Percentage of people surveyed who feel that they can influence decisions affecting their local area ▪ Green Flag Award Public Open Space
13	SUSTAINABLE COMMUNITIES Reduce crime and the fear of crime	<ul style="list-style-type: none"> ▪ Crime rates: Violent, Vehicle, Burglary, Racially Motivated and Drug Offences ▪ Residents that feel fairly safe or very safe outside in daylight/dark ▪ Number of ASBOs
14	HEALTH Improve access to health facilities and promote healthy lifestyles	Targets: increase adult participation in sport <ul style="list-style-type: none"> ▪ Early deaths from i) heart disease and Stroke, ii) Smoking and iii) Cancer ▪ Limiting illnesses ▪ General health good/fairly good
15	HOUSING Ensure everyone has access to a decent home that they can afford and meets their needs	Target: to deliver objectively assessed need over the plan period <ul style="list-style-type: none"> ▪ Housing stock ▪ Total number of affordable and social rented properties ▪ Average house price to average income ratio ▪ Total net new housing completions ▪ Number of houses in multiple occupation ▪ Vacant dwellings ▪ Unfit Dwellings (all housing types)
16	GREEN SPACE Create, enhance, protect, connect and improve access to open spaces.	<ul style="list-style-type: none"> ▪ No. of parks with Green Flag/Green Pennant ▪ ANGST standards ▪ Access to public open space ▪ Access to woodland ▪ Registered parks and gardens ▪ Number and Area of land designated as Local Nature Reserves

17	EDUCATION AND SKILLS Improve access to education and life-long learning and enhance skills	<ul style="list-style-type: none"> ▪ Education Deprivation/ Skills: NVQ4 or higher/ Education: No qualifications ▪ 15 year olds achieving 5+ GCSEs at grades A* to /C ▪ Percentage of unemployed people claiming benefits who have been out of work for a year or longer ▪ Number of economically active on Job Seekers Allowance ▪ Job seekers allowance (caseload per 1,000)
18	CULTURE AND TOURISM Protect and enhance cultural heritage and promote tourism	<ul style="list-style-type: none"> ▪ Percentage of conservation areas with up to date: character appraisals and management proposals ▪ Culture South West Action Plan identified needs met ▪ Percentage of work force in tourism related industries ▪ Total estimated tourism spend

10.0 Summary, Conclusions and Next Steps

Summary and Conclusions

- 10.1 The integrated sustainability appraisal process has considered the strategic environmental and wider sustainability effects that are likely, or that have the potential to occur, as a result of the implementation of the Draft Gloucester, Cheltenham and Tewkesbury Joint Core Strategy. Initially during 2008-2012, the SA was carried out by Council Officers; latterly, the SA process has been undertaken by an independent team of appraisal specialists working in an iterative and ongoing way with the plan-making teams during 2012-14 and the preparation of the Pre-Submission Draft JCS. Habitats Regulations Assessment (HRA) and Equalities Impact Assessment were also undertaken at the same time; the findings from these assessments were incorporated into the SA and this Report.
- 10.2 The SA scoping process in 2008 included consultation to help ensure that the characteristics and the sustainability issues for the Plan area were identified and incorporated into the SA framework to form the basis for undertaking the assessments. This consultation has continued throughout with the SA reports placed on public consultation at the same time as the developing Plan (Issues & Key Questions, Developing the Preferred Option). Thus the public and others have had an early and ongoing opportunity to comment on the SA. The baseline information, that forms the basis for assessment, has been updated during 2013 and the sustainability issues identified remain relevant.
- 10.3 Throughout the development of the Pre-Submission Draft JCS, alternatives have been considered and appraised through the SA process in an iterative and ongoing way such that the findings of the SA have informed plan-making. During 2010-2011 and the JCS Developing Preferred Option, options for the spatial strategy and potential strategic allocations and broad locations for potential housing and employment land were investigated by Council Officers through plan-making and subject to SA. The options for the strategic approach were subject to fresh SA by the independent consultants in 2012-13.
- 10.4 The potential options for strategic allocations and urban extensions were refined as a result of further studies and consultation, and these were subject to independent SA. The options taken forward into the Draft JCS were those that had least negative effects on environmental factors with the most positive effects for socio-economic factors, including being in line with the overall strategy and being deliverable in the period of the JCS.
- 10.5 Where appropriate the SA process has made recommendations and suggestions to enhance the positive effects identified and to mitigate negative effects. These recommendations have been in addition to the mitigation and enhancement measures contained within the Plan that reflect the ongoing plan

developments and appraisal recommendations arising from earlier stages. Wherever possible, the plan-making incorporated the recommendations and suggestions from the SA. The initial SA in 2011, together with constraints analysis and other studies, informed the development of the potential options for strategic allocations. Constraints and likely significant negative effects, particularly on landscape, green belt and flooding indicated a limited number of development possibilities that were investigated further in 2012-13. Thus the options subject to SA in 2013 had already avoided significant negative effects.

- 10.6 Key influences for sustainable development arising from the SA include the proposed strategic allocations that avoid significant negative effects and optimise opportunities for housing, employment and communities. The SA contributed to strengthening and clarifying policies with regard to protecting landscape, green space and historic assets, enhancing accessibility and reducing inequalities, sustainable transport, adapting and mitigating climate change, and sustainable design and construction. This demonstrates the difference that the SA has made to the Pre-Submission Draft JCS.
- 10.7 The SA found that the overall the implementation of the Pre-Submission Draft JCS policies is likely to have significant positive effects, particularly with regard to:
- meeting housing needs with long term positive effects
 - strengthening communities and reducing inequalities with long term cumulative positive effects
 - prioritising economic growth with an urban focus in key locations
 - avoiding flood risk
 - protecting the distinctive landscape and open/green space
 - protecting the distinctive historic assets and settings
 - commitment to Green Infrastructure with its multi-functional uses including flood risk management, enhancement of biodiversity, and recreation space for people – with long term cumulative effects
- 10.8 Some negative effects were also identified - largely as a result of the overall cumulative effects of the proposed quantum of housing, employment and associated infrastructure in the JCS area. Increased contributions to greenhouse gases are likely, arising from transport and the embodied energy inherent in construction. Potential negative effects, for example, noise, air pollution, congestion, loss of tranquility and wider health/well-being objectives, may arise from increased road traffic. There are also potential negative effects from significant physical changes to local areas with impacts on biodiversity, landscape/townscape and the historic environment.
- 10.9 The details and specific mitigation of these minor negative effects will be addressed at the next stage of planning with masterplans and project level Environmental Impact Assessment (EIA). There is some uncertainty regarding the effectiveness of mitigation possibilities as this will depend upon further detailed studies and the implementation of development management policies; the SA

made suggestions to help scope the requirements for project level SA and EIA. The Pre-Submission Draft JCS makes clear requirements for proposed development including assessments, standards for construction and design, and timely phasing including for the supporting infrastructure.

- 10.10 The Sustainability Appraisal of the Pre-Submission Draft JCS has appraised the effects of policies, strategic allocations, and the overall effects of implementing the plan, including cumulative effects. The SA has identified that the Pre-Submission Draft JCS will deal with identified sustainability issues in the area, particularly for communities through the allocation of housing and employment land with associated infrastructure, including improvements to Green Infrastructure and sustainable transport, and flood risk management. The SA has also identified that the Pre-Submission Draft JCS will protect the distinctive landscapes, green spaces and historic environment of the area at the strategic level. Negative effects arising from the overall growth in development, in particular local impacts on landscape, green space and the historic environment will require mitigation at the next level of planning and assessment.

Next Steps

- 10.11 The consultation responses received will be considered and any significant changes made to the Pre-Submission Draft JCS will be subject to further appraisal; an updated SA Report will be published alongside the JCS Submission document in Winter 2014.
- 10.12 The SA Report is available for review and comments alongside the Pre-Submission Draft JCS document for a 6 week period during Summer 2014. The documents are available to download from the JCS website at www.gct-jcs.org and at 'deposit locations' across the area, as set out in the Consultation Statement. Responses should be made using the questionnaire, an online version of which can be downloaded from the JCS website. Hard copies are also available at the deposit locations, and should be returned to the following address:

Joint Core Strategy Team
Municipal Offices
Promenade
Cheltenham
Gloucestershire GL50 9SA

GLOSSARY

MR	Monitoring Report - Government requires local planning authorities to produce annual Monitoring Reports (MRs) relating to Local Plans. According to Government guidance, these need to include the findings of SA monitoring.
AONB	Area of Outstanding Natural Beauty. A landscape area of high natural beauty which has special status, and within which major development will not be permitted, unless there are exceptional circumstances. Designated under the 1949 National Parks and Access to Countryside Act.
Compatibility Analysis	The comparison of the vision and strategic objectives against the SA Framework.
Cumulative Effects	The effects that result from changes caused by a project, plan, programme or policy in association with other past, present or reasonably foreseeable future plans and actions. Cumulative effects are specifically noted in the SEA Directive in order to emphasise the need for broad and comprehensive information regarding the effects.
Ecosystem	An ecosystem is a community of living organisms (plants, animals) and the non-living components of their environment (air, water, soil) interacting as a system.
Ecosystems Approach	An ecosystems approach provides a framework for looking at whole ecosystems in decision making, and for valuing the ecosystem services they provide, to ensure that society can maintain a healthy and resilient natural environment now and for future generations.
EqIA	Equality Impact Assessment - a process of analysing a proposed or existing service, strategy, policy or project. The aim is to identify any effect or likely effect on different groups within the community. The outcome is to make sure that, as far as possible, any negative consequences for minority groups are eliminated or minimised and opportunities for promoting equality are maximised.
Green Infrastructure	Green Infrastructure (GI) is a network of high quality green and blue spaces and other environmental features. It is designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits (ecosystem services) for local communities. Green Infrastructure includes parks, open spaces, playing fields, woodlands, wetlands, grasslands, river and canal corridors allotments and private gardens.
HIA	Health Impact Assessment - is a practical approach that determines how a proposal will affect people's health. Recommendations to 'increase the positive' and 'decrease the negative' aspects of the proposal are produced to inform decision-makers.
HRA	Habitats Regulations Assessment - The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
Indicator	A means by which change in a system or to an objective can be measured.
LEP	Local Enterprise Partnership
Mitigation	Measures to avoid, reduce or offset the significant adverse effects of the plan on sustainability.
Monitoring	Activities undertaken after the decision is made to adopt the plan or programme to examine its implementation. For example, monitoring to examine whether the significant sustainability effects occur as predicted or to establish whether mitigation measures are implemented.

Objective	A statement of what is intended, specifying the desired direction of change.
SA	Sustainability Appraisal - A process by which the economic, social and environmental impacts of a project, strategy or plan are assessed.
SA Framework	The SA Framework provides the basis by which the sustainability effects of the emerging development planning document will be described, analysed and compared. It includes a number of sustainability objectives, elaborated by 'decision-aiding questions'.
SAC	Special Area of Conservation - a designation made under the Habitats Directive to ensure the restoration or maintenance of certain natural habitats and species some of which may be listed as 'priority' for protection at a favourable conservation status.
SCI	Statement of Community Involvement – sets out the Councils' vision and strategy for the standards to be achieved in involving the community and stakeholders in the preparation of all Local Development Documents and in decisions on planning applications.
Scoping	The process of deciding the scope and level of detail of the SEA. This also includes defining the environmental / sustainability effects and alternatives that need to be considered, the assessment methods to be used, the structure and contents of the Environmental / Sustainability Report.
Screening	The process of deciding whether a plan or programme requires SEA or an Appropriate Assessment.
SEA	Strategic Environmental Assessment - systematic method of considering the likely effects on the environment of policies, plans and programmes.
SEA Directive	Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment".
SFRA	Strategic Flood Risk Assessment - Detailed and robust assessment of the extent and nature of the risk of flooding in an area and its implications for land use planning. Can set the criteria for the submission of planning applications in the future and for guiding subsequent development control decisions. SFRA's inform sustainability appraisal.
Sustainability Appraisal	A systematic assessment process designed to promote sustainable development through the integration of social, environmental and economic considerations into the preparation of Regional Spatial Strategies and new or revised Development Plan Documents and Supplementary Planning Documents.
SSSI	Site of Special Scientific Interest - Areas of high quality habitat (or geological features) of regional, national or international nature conservation importance, designated by English Nature.
Target	A specified desired end, stated usually within a specified time-scale.