

Shaping our Place 2026
Local Development Framework

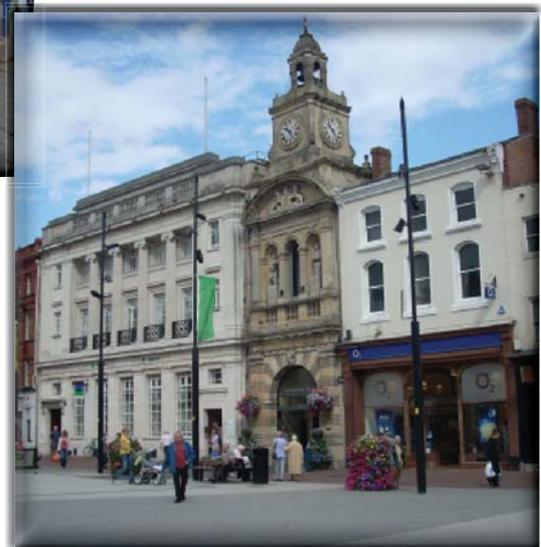
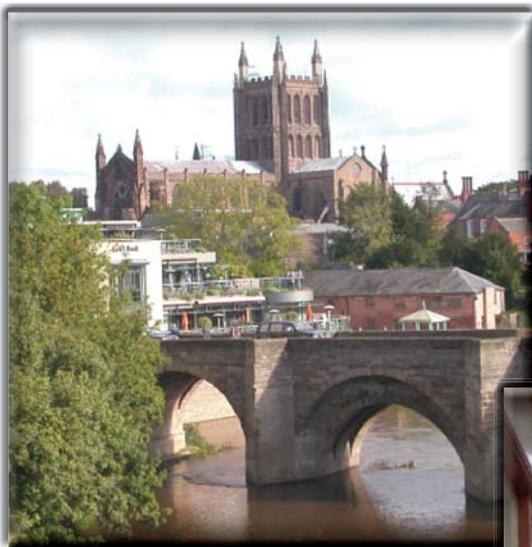
Preferred Option:

Hereford

September 2010

Sustainability Appraisal

Follow on consultation



Herefordshire Core Strategy Preferred Options Consultation September-October 2010

Sustainability Appraisal Note – Hereford

1 Introduction

1. Herefordshire County Council is producing a Core Strategy, in order to set out the vision, spatial strategy and core policies for the spatial development of the county. The Core Strategy will form part of the Local Development Framework (LDF), along with a number of other documents including the Hereford Area Plan (HAP).
2. Land Use Consultants (LUC) has been appointed by Herefordshire County Council to undertake Sustainability Appraisal (SA) of both the Herefordshire Core Strategy and the Hereford Area Plan DPDs. The SA of the Hereford Area Plan will be carried out and reported on separately.
3. Herefordshire County Council has begun the SA process in relation to the Core Strategy, having produced the following documents:
 - SA of Herefordshire's LDF – General Scoping Report (June 2007)
 - Developing Options Paper Sustainability Appraisal (June 2008)
 - Developing Options Paper Sustainability Appraisal Addendum (March 2009)
 - Joint SA and HRA Report for the Place Shaping Paper (January 2010)
4. Preferred Options for certain core policies within the Core Strategy, as well as spatial options for three of the market towns within the county, were produced and were subject to a targeted consultation during July-August 2010. The initial SA work therefore covered the SA of the preferred options for the core policies relating to:
 - Spatial Options for Ledbury, Bromyard and Ross-on-Wye
 - Rural areas
 - General Policies, covering:
 - Affordable housing
 - Employment
 - Gypsy and traveller sites
 - Local distinctiveness

- Minerals
 - Waste
 - Movement
 - Open space, sport and recreation
 - Social and community infrastructure
5. A spatial option document for Hereford has now been produced containing six policies, which this SA note relates to. Approximately four further general policies will be produced at a later date (anticipated to be late September 2010) and these will then also be subject to SA.
6. The findings of the sustainability appraisal of the emerging Core Strategy Preferred Options are presented in separate SA Notes: one relating to the spatial options for the market towns; one relating to the rural areas policies; one for the general core policies and one for Hereford. Once all of the emerging options have been appraised, the SA Notes will be updated and extended to form a full interim SA Report, which considers the potential sustainability impacts of the Core Strategy as a whole.

2 Methodology

7. The SA process involved assessing each of the preferred options against the SA framework that was developed in the SA Scoping Report. The twenty headline SA objectives shown in **Table I** below were grouped into six themes (see **Appendix I** to this note for the full list of SA objectives and sub-objectives included in each theme):
1. Education and Employment
 2. Healthy and Prosperous Communities
 3. Transport and Access
 4. Built Environment
 5. Resource Consumption and Climate Change
 6. Natural Environment.

Table 1 SA headline objectives

1	Support, maintain or enhance the provision of high quality, local or easily accessible employment opportunities, suited to the changing needs of the local workforce.
2	Secure a more adaptable and higher skilled workforce.
3	Maintain or enhance conditions that enable a sustainable economy and continued investment.
4	Reduce road traffic and congestion, pollution and accidents and improve health through physical activity by increasing the proportion of journeys made by public transport, cycling and walking.
5	Improve the health of the people of Herefordshire, reduce disparities in health geographically and demographically and encourage healthy living for all.
6	Improve equality of access to and engagement in quality cultural, educational, leisure, sporting, recreational and community activities for all.
7	Sustainable regeneration
8	Raise educational achievement levels across the County.
9	Reduce and prevent crime/fear of crime and antisocial behaviour in the county.
10	Reduce poverty and promote equality, social inclusion by closing the gap between the most deprived areas in the county and the rest of the county.
11	Provide everyone with the opportunity to live in good quality, affordable housing of the right type and tenure, in clear, safe and pleasant local environments.
12	Reduce the amount of waste requiring disposal and minimise the use of non-reusable materials and encourage recycling.
13	Value, maintain, restore and expand county biodiversity.
14	Use natural resources and energy more efficiently.
15	Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces.
16	Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.
17	Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.
18	Minimise local and global pollution and protect or enhance environmental resources.
19	Ensure integrated, efficient and balanced land use.
20	Value, protect and enhance the character and built quality of settlements and neighbourhoods and the county's historic environment and cultural heritage.

8. Appraisal matrices were used to score each option against headline objectives within each theme (or group of SA objectives) using the following symbols:

++	The policy is likely to have a significant positive impact on the SA objective(s).
+	The policy is likely to have a positive impact on the SA objective(s).
0	The policy is likely to have a negligible or no impact on the SA objective(s).
+/-	The policy is likely to have a mixture of positive and negative impacts on the SA objective(s).

–	The policy is likely to have a negative impact on the SA objective(s).
--	The policy is likely to have a significant negative impact on the SA objective(s).
?	It is uncertain what effect the policy will have on the SA objective(s), due to a lack of data.

9. The appraisal was initially carried out for the six draft policy preferred options prepared by the Council (early September 2010) and recommendations for improvements were set out in the appraisal matrices. The Council then produced a finalised set of six policy preferred options (late September 2010), which had been amended in light of the SA recommendations made. In order to clarify where changes were made by the Council, the appraisal has been updated with a second row of scores, showing where changes to the scoring resulted from amendments made to the policies. In addition, notes have been added in italics underneath each recommendation, explaining whether and how the policy preferred option was amended by the Council.
10. At this stage, three of the discounted options relating to development at Hereford have also been appraised. All were raised as an alternative to the Place Shaping Options, during that consultation in January-March 2010. The first discounted option relates to the Hereford City Centre Policy (H1):
 - Retail expansion in historic core and leisure and housing (affordable) on ESG area

The other two discounted options relate to the Growth Distribution Policy (H3):

 - Develop land over two plan periods and increase the total amount of homes
 - Development predominantly in the south
11. A number of other alternative options also came forward during the Place Shaping consultation; however these have not been subject to SA as they were not considered by Herefordshire County Council to represent ‘reasonable alternative’ options (for the reasons provided in the Hereford Preferred Options document). The options above were considered to be reasonable and had not previously been subject to SA; therefore they have been appraised at this stage. It should be noted that the three options above are relatively broad, being described only as stated above. They do not have any more spatial definition or further criteria to characterise how they would be delivered, and this is reflected in the sustainability appraisal.
12. In addition to the three housing/employment development options above, the two routes for the relief road arising from the Study of Options¹, have been subject to sustainability appraisal. The Study of Options report describes the further assessment work on the relief road and sustainable transport options carried out since the Place Shaping consultation, from which the inner western and inner eastern corridor routes have emerged as the favoured

¹ Hereford Relief Road. Study of Options. Prepared by Amey UK plc for Herefordshire Council, September 2010

options based on the detailed engineering and environmental assessment undertaken. While the Hereford Preferred Option Policy H2 proposes the western inner corridor route as the preferred route for the relief road, the eastern inner corridor route is considered to be a reasonable alternative, thus both of these options have now been subject to sustainability appraisal.

3 Findings

13. **This document relates to the policy options for Hereford. Table 2** provides a summary of the SA scores for each of the 20 headline objectives, and a description of the SA findings for each of the six policies are set out in the **Tables 3 to 9**. The discounted options have not been scored against each of the SA objectives in **Table 2** as they did not include enough detailed information to be able to make a detailed judgement against each individual SA objective.

Land Use Consultants

27th September 2010

Table 2 Summary of SA scores for SA headline objectives

	SA Objectives and Theme																			
	Education & Employment					Healthy & Prosperous Communities			Transport & Access		Built Environment			Resource Consumption & Climate Change			Natural Environment			
Core Strategy Policies	1	2	3	7	8	5	9	10	4	6	11	19	20	12	14	16	13	15	17	18
H1: Hereford City Centre Policy	+	+?	+	++	+	+	+	+	+/-	+	+?	+?	++?	+/-	+/-	+/-	+/-	+/-	+/-	+/-
H2: Hereford Movement Policy	0	0	0	+	0	+	0	+	++/-	0	0	+	+	0	+/-	+/-	+/-	-	0	+
H3: Growth Distribution Policy	++	+?	+	+	+	+	0	+	++	+	++	+/-	+	-?	++	+	+/-	+?	+?	+/-
H4: Northern Expansion Policy	++	+?	?	+?	+?	+	0	+	+?	+	++	+/-	+/-	-?	+/-	+/-	+/-	-?	+?	+/-
H5: Western Expansion Policy	++	+?	?	+?	+	+	0	+	+/-	+	++	+/-	+/-	-?	+/-	+/-	+/-	-	+/-	+/-
H6: Southern Expansion Policy	+	+?	+?	+?	+	+	0	+	+/-	+	++	+/-	+/-	-?	+/-	+/-	+/-	-	+/-	+/-
Relief Road – Western Route	+?	+?	0	+/-	0	+/-	0	+	++/-	+	+/-	-	+/-	-?	-	-	--?	--	-	+/-
Relief Road – Eastern Route	+?	+?	0	+/-	0	+/-	0	+	++/-	+	+	-	+/-	-?	-	-	--	-	--	+/-

Note that sub-objectives for SA headline objectives 7 and 18 are divided into more than one theme, according to the issues that they address. However, SA headline objectives 7 and 18 have only been scored once in this summary table, under the theme that contains most of the sub-objectives.

Table 3: Appraisal findings for policy H1

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H1: Hereford City Centre Policy (first draft version)	++	+	+/-?	++/-	+/-	+/-

Education and Employment

This policy should have a positive effect on the provision of employment opportunities (SA objective 1) by encouraging the provision of new commercial and office space in appropriate city centre locations; although it does not allocate any city centre site specifically for commercial/employment use. The provision of employment opportunities may in turn increase the available opportunities for work-based training and skills development (SA objective 2.1). However, the types of employment opportunities, or commercial and office space to be provided are not specified and it is uncertain whether such opportunities would be available and therefore whether a more adaptable and higher skilled workforce (SA objective 2) would be developed.

The policy also provides for additional retail floorspace, which would be constructed (or redeveloped) in the western (Eign Gate area) and northern (old livestock market) parts of the city, providing jobs during construction and afterwards in the management and operation of the new shops. The new retail floorspace is intended to accommodate bigger name high street retailers not currently available in Hereford. Therefore, the policy should have a positive effect by enhancing conditions that enable a sustainable economy and continued investment (SA objective 3).

The provision of these new retail premises, which are intended to improve the retail offer within Hereford, is likely to have a significant positive effect on sustainable regeneration, as it places a strong emphasis on increasing the vitality of the city centre and creating a range of independent, competitive and national retailers (SA objective 7.2). Encouraging residential provision on the upper floors of commercial premises should have further benefits for the vitality of the city centre and increasing the occupation rate of buildings (SA objective 7.3).

The policy makes provision for a new higher and further education hub, helping to meet the additional demand for education infrastructure (SA objective 8.1) that is likely to result from the housing development planned under other Core Strategy policies, and also to improve the attractiveness of the city to young people, post school age.

Based on the above, an overall significant positive effect on the theme of Education and Employment is likely to result from this policy.

Healthy and Prosperous Communities

The provisions made within the policy for increasing the use of sustainable modes of transport through the development of an integrated transport hub close to the railway station, pedestrian upgrading of Newmarket and Blueschool Streets and the provision of pedestrian/cycle links from the new urban village may have a positive impact on promoting healthy lifestyles among the local population (SA objective 5.3) as levels of walking and cycling, and therefore overall levels of activity, are likely to increase. The provision of sports and leisure facilities should also help to increase overall rates of activity and benefit public health. The policy also supports sustainable regeneration, by increasing the quality of public spaces (SA objective 7.4) within the city centre, specifying that valuable open spaces should be protected.

The measures proposed for the city centre may have a positive impact on reducing crime and antisocial behaviour and encouraging respect for the local area (SA objective 9) as the vitality and quality of the city centre environment should be improved and this may encourage an increased sense of pride amongst local people. The provision of new employment opportunities, including through the expansion of Hereford's retail offering, should help to reduce poverty and deprivation within Hereford by increasing

overall employment and income levels (SA objective 10).

Based on the above, an overall positive effect on the theme of Healthy and Prosperous Communities is likely.

Transport and Access

The policy should have a positive effect on increasing the proportion of journeys made by public transport, cycling and walking (SA objective 4), as it allows for the development of an integrated transport hub for sustainable modes of transport in a central location near to the train station, and will provide pedestrian/cycle links from the new urban village to the city centre and railway station, as well as improved pedestrian connections from the town centre to the northern city centre expansion area. However, the policy also promotes the construction of a new link road to the northern city centre expansion area, which may have a negative effect by encouraging continued car use, despite helping to reduce levels of congestion within the city centre.

Pedestrian upgrading of Newmarket Street and Blueschool Street and providing pedestrian links to and from the existing retail centre to the new retail areas in the northern city centre expansion area and the urban village residential development should help to improve access to and engagement in cultural and leisure facilities (SA objective 6). In addition, the supporting text to the policy states that opportunities exist to make a feature of the canal basin and its corridor within the new residential area of the urban village, which would help to promote the use of inland waterways for leisure and recreation (SA objective 6.3).

The redevelopment and construction of new homes, retail areas and new commercial and office space provides an opportunity to contribute to the development of services and facilities appropriate to the community, function, character and scale of the centre, in turn helping to provide access to sufficient services and facilities to meet future growth in Hereford (SA objective 7).

Based on the above, an overall mixed (minor positive and negative) but uncertain effect on the theme of Transport and Access is likely.

The Built Environment

The development of 800 new homes to the north of the city centre in the urban village, of which a third are to be affordable, should have a positive effect on improving access to affordable good quality housing (SA objectives 11.1 and 11.2).

The new urban village involves redeveloping a large area of previously developed land, and the policy also encourages the development of the upper floors of retail premises for residential use, which has a positive effect on efficient land use by optimising the use of previously developed land and buildings, focused in urban areas (SA objective 19.1). The new urban village should also have a positive effect on encouraging sustainable resource-efficient design (SA objectives 11.5 and 19.2) as sustainable design and construction techniques are encouraged. However, there is not currently a requirement for other development proposed by the policy (retail, commercial, office) to use sustainable and resource efficient design and construction techniques.

The policy places a strong emphasis on preserving and enhancing the historic assets of the city centre, as well as promoting tourist developments which respect the city's historic character, heritage and local distinctiveness, which should have a significant positive effect on valuing, protecting and enhancing the character of the county's historic environment and cultural heritage (SA objective 20). The new urban village should also have a positive effect on protection and enhancement of the character and built quality of Hereford (the other aspect of SA objective 20) as 'high quality sustainable design' techniques are encouraged. However, there is not currently a requirement for other development proposed by the policy (retail, commercial, office) to use high quality or sustainable and resource efficient design and construction techniques. There is also no explicit requirement for the rest of the development proposed (e.g. retail, commercial and office development) to be appropriate in scale, form or design to the setting and character of the local area.

Based on the above, an overall mixed (significant positive and minor negative) effect on the Built Environment theme is likely.

Resource Consumption and Climate Change

The development proposed by the policy will inevitably lead to waste production (SA objective 12.2); however it is unclear whether measures are to be incorporated into the new urban village to encourage re-use and recycling of waste (SA objective 12.3). The policy states that resource use will be minimised during construction of the new houses, but providing for adequate waste storage to encourage recycling is not specifically addressed. This is also not covered by the other general policies on waste within the Core Strategy.

The 800 new homes to be built to the north of the city centre are to be 'highly energy efficient' (SA objective 14.1); however no mention is made of the source of energy supply and whether renewable installations are to be incorporated into the site, which could increase the positive effects in relation to this objective. The sustainable design and construction techniques required for the 800 new homes, and the re-use of upper floors of retail and commercial premises for residential use should help to minimise consumption of natural resources (SA objectives 14.2 and 14.3), but again, other types of development do not have this requirement in the policy, therefore it is unlikely that SA objective 14 would be fully achieved.

The plans to incorporate SUDS into the new urban village development should help to reduce the city's vulnerability to the risk of flooding which is likely to increase as a result of climate change (SA objective 16). However, this requirement should apply to all the types of new development proposed in the policy and not just the residential development. The supporting text to the policy refers to associated development required in order to alleviate flooding being an essential part of the new urban village proposals (including the Yazor Brook Flood Alleviation Scheme, which is designed to divert flood waters from the Yazor Brook at Credenhill to the River Wye, to the west of the city²). Reference could be made within the policy to the essential flood alleviation requirements, although it may be intended for inclusion within the more detailed proposals in the Hereford Area Plan.

The measures included within the policy in terms of sustainable transport development should help to reduce Hereford's contribution to climate change and pollution (SA objectives 16 and 18); although the road improvements planned may encourage continued car use and therefore maintain levels of emissions from vehicle traffic.

Based on the above, an overall mixed (minor positive and negative) effect on the theme of Resource Consumption and Climate Change is likely.

The Natural Environment

The policy makes very little mention of the natural environment and the need to conserve and enhance biodiversity assets (SA objective 13). Although the policy refers to Hereford city centre rather than to a rural area, this is still an important issue even in the urban context, particularly as the River Wye SAC and SSSI runs through the centre of Hereford, and this should be recognised within the policy wording. The policy does encourage the creation of open spaces and green infrastructure in relation to the new urban village, which should help improve habitat linkages and reduce fragmentation (SA objective 13.3), but this should be encouraged across the city, not just within the regeneration area.

The fact that the development proposed is within the existing urban area means that a negative impact on the quality of the rural landscape (SA objective 15) is unlikely. However, there may be impacts on the townscape within Hereford, although the precise impacts will depend on the design and visibility of the new development, particularly the new urban village. The urban village lies mainly in Hereford Character Area 5 (the Edgar Street Grid), and Appendix V of the Hereford Townscape Assessment³ describes aspects of the townscape that contribute to the character of the Edgar Street Grid area which should be preserved or enhanced. It also notes that many of the industrial/commercial buildings in the character area are of limited architectural merit. Their replacement by well-designed residential or commercial/industrial schemes that respect both the historic architectural character and plan-form would contribute to the townscape character of the area. Therefore, there are opportunities for the urban village and other redevelopment proposed in Policy H1 to have positive effects on the townscape within

² <http://www.esgherefordshire.co.uk/development/infrastructure.aspx>

³ [http://www.herefordshire.gov.uk/docs/hereford_rapid_townscape_assessment_draft_march_2010\(1\).pdf](http://www.herefordshire.gov.uk/docs/hereford_rapid_townscape_assessment_draft_march_2010(1).pdf)

Hereford, and reference could be made within the supporting text to the recommendations of the Hereford Townscape Assessment work.

The policy should have positive effects on reducing flooding (SA objective 17) as it states that SUDS should be incorporated into the new urban village, and the provision of open space and green infrastructure should help to avoid too great a proportion of the land surface becoming impermeable as a result of development. However, again, this should apply to all types of new development proposed and not just the residential development. As also noted above, the flood alleviation scheme within the new urban village should also contribute to reducing flooding, and reference should be made within the policy to this.

Development, particularly of the housing proposed, within Hereford may have a significant negative effect on water quality (SA objective 18.1) in the River Wye as the two sewage treatment works serving Hereford (Eign and Rotherwas) both discharge into the Wye and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from the new housing to be provided in Hereford.

An Air Quality Management Area (based on levels of nitrogen dioxide) has been declared within Hereford along the A49 corridor, extending from Holmer Road in the north to Belmont Road in the south and east along New Market/Blue School Street and west along Eign Street to Barton Yard. If the development proposed within the city were to result in an increase in vehicle traffic, particularly in this already heavily polluted area, for example as a result of car movements to and from the new urban village which lies just to the north of the AQMA, there may be a negative effect on air quality (SA objective 19.4). Although the measures included within the policy in relation to sustainable transport use should have some beneficial effects by reducing vehicle traffic and therefore levels of air pollution, the scale of development proposed means that there are still likely to be some adverse impacts in terms of traffic generation.

Based on the above, an overall mixed effect (minor positive or significant negative) is likely to result from the policy in relation to the Natural Environment theme.

Discounted Option – Retail expansion in historic core and leisure and housing (affordable) on ESG area

Very little specific detail was given for this discounted option in the consultation response to the Place Shaping Paper with regards to the precise location, nature and extent of the development proposed. Therefore, only the general sustainability effects of expanding the retail provision in the historic core and the leisure and housing development on the ESG area have been predicted. In terms of the SA objectives within the Education and Employment theme, a positive effect is likely to result from the employment creation in the city centre from the retail expansion proposed in the historic core. However, depending on the number of homes to be provided, the employment provision may not adequately meet the demand from the resulting population increase.

Locating residential development in the ESG area, which is centrally located, may have a positive impact on Healthy and Prosperous Communities by enabling the increased use of active sustainable transport modes such as walking and cycling. Access to community services and facilities (including the leisure provision on the ESG area) would also be easier for the residents who would be located within the city centre, thus having a positive effect on social inclusion.

In terms of Transport and Access, the location of development in the city centre should ensure that it is relatively easy for people to access from all areas of the city, in particular via sustainable transport, and from beyond, for example making use of the existing rail links into Hereford city centre. This is particularly important in relation to the retail development, which may attract people from a large catchment area around the outside of Hereford. However, if adequate provision is not made for sustainable transport (as proposed under policy H2), congestion problems in the city centre may be

⁴ [http://www.herefordshire.gov.uk/docs/hereford_rapid_townscape_assessment_draft_march_2010\(1\).pdf](http://www.herefordshire.gov.uk/docs/hereford_rapid_townscape_assessment_draft_march_2010(1).pdf)

compounded by the development drawing in larger numbers of visitors.

Focussing development within the city centre in general should have a positive effect on the Built Environment, by offering the opportunity to improve the overall appearance and quality of the townscape through the use of good design. However, the impacts of this will depend on currently unknown factors such as the style of the development and the incorporation of green infrastructure etc. to enhance the overall layout of the city centre.

The likely effect of the proposal on Resource Consumption and Climate change is uncertain without more detailed information about the precise location, nature and design of the development that would result from the option.

In terms of the Natural Environment, the fact that the development would occur within the existing urban area means that a negative impact on the quality of the rural landscape is unlikely. However, there may be impacts on the townscape within Hereford, although the precise impacts will depend on the design of the new development. The Edgar Street Grid is within Hereford Character Area 5 - Appendix V of the Hereford Townscape Assessment⁴ describes aspects of the townscape that contribute to the character of the Edgar Street Grid area which should be preserved or enhanced. It notes that many of the industrial/commercial buildings in the area are of limited architectural merit. Their replacement by well-designed residential and leisure development that respects both the historic architectural character and plan-form would contribute to the townscape character of the area. Therefore, there are opportunities for the development proposed in this option to have positive effects on the townscape within Hereford.

Development, particularly residential, within Hereford city centre may have a significant negative effect on water quality in the River Wye as the two sewage treatment works serving Hereford (Eign and Rotherwas) both discharge into the Wye and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from new housing to be provided in Hereford. However, this potential effect will depend on the number of homes to be provided in the ESG area, which is not specified in the option.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version

Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

No specific recommendations are made in relation to this theme.

Transport and Access

No specific recommendations are made in relation to this theme.

The Built Environment

The paragraph within the policy which refers to heritage could be improved by being more locally specific; e.g. making reference to particular assets within the city which require particular protection. Although the supporting text makes reference to specific assets, the statement within the policy itself is generic and could refer to any town or city. Some of the more locally specific information provided in the supporting text should be brought into the policy itself. In addition, the policy should require development other than residential development to be high quality and sustainably designed and constructed, unless this will be covered in the general sustainable design policy in the Core Strategy (still to be drafted).

The policy wording has been amended to incorporate an overarching statement at the beginning, stating that development will incorporate high quality, sustainable design. The heritage section of the policy has also been amended to make specific reference to the Berrington Street area in particular.

Resource Consumption and Climate Change

The positive sustainability effects of the energy efficient design of the new homes to be provided at the urban village to the north of the city centre could be increased by requiring renewable energy sources to be incorporated within the development. The supporting text refers to 'sustainable energy usage' but this could be reworded as 'renewable energy usage' for clarity and brought into the wording of the policy itself. The policy should also require development other than residential development to be constructed to high environmental standards, improving energy efficiency in buildings such as shops, other employment sites and community facilities, unless this is to be covered within the general sustainable design policy in the Core Strategy (still to be drafted). The sustainable design policy should also provide for adequate waste storage to encourage recycling in all new development. Reference should be made within the policy to the essential flood alleviation requirements that will form part of the urban village development.

The policy wording has been amended to incorporate an overarching statement at the beginning, stating that development will incorporate high quality, sustainable design.

The Natural Environment

The policy should recognise the need to conserve and enhance local biodiversity assets and should make specific mention of the need for protection of locally important habitats and species, in particular the River Wye SAC which runs through the city centre. In order to avoid significant effects on water quality in the River Wye, Herefordshire Council needs to ensure that sufficient sewage treatment infrastructure/capacity is provided prior to development of the additional 800 homes in the new urban village.

The heritage part of the policy has been extended to make reference to the need to protect and enhance natural features such as the River Wye corridor and its biodiversity.

The policy should also incorporate some recognition of the need to preserve the quality and character of the local landscape/townscape within the city centre, in particular round the areas proposed for redevelopment, and reference could be made in the supporting text to the Hereford Rapid Townscape Assessment. Although the supporting text to the policy makes passing reference to the need to maintain and enhance the city's 'environmental assets', no detail is provided and this requirement is not reflected in the policy wording.

Reference to the Rapid Townscape Assessment has been brought into the policy.

The SA findings in relation to the discounted option cannot be easily compared with those of the preferred approach (H1) due to the lack of detailed information within the discounted option about the development that would result.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H1: Hereford City Centre, as included in the consultation document.	++	+	+/-?	++/-	+/-	+/-

Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect.

Table 4: Appraisal findings for policy H2

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H2: Hereford Movement Policy (first draft version)	0	+	++/-	+/-?	+/-?	+/--?
<p><u>Education and Employment</u> The policy is not expected to have a direct effect on any of the SA objectives in this theme. As such, a negligible effect on Education and Employment is likely to result from this policy.</p> <p><u>Healthy and Prosperous Communities</u> The provision of a relief road to divert traffic away from the city centre should have a positive effect on the health of local people (SA objective 5) by improving air quality within the city centre. Encouraging increased levels of walking and cycling in place of car use for every day journeys such as travelling to school and to work should increase overall levels of activity within the community and enhance healthy lifestyles in Hereford (SA objective 5.3).</p> <p>The measures included within the policy to reduce congestion within the city centre should help to increase the overall quality of the area (e.g. by reducing noise and visual intrusion) and may improve safety for both road users and pedestrians, thereby having a positive effect on sustainable regeneration (SA objective 7.4).</p> <p>The policy is not anticipated to have a direct effect on levels of crime (SA objective 9), although the enhancements to pedestrian and cycling routes may help to reduce fear of crime in those areas particularly at night.</p> <p>Improving linkages between different areas of the city, e.g. through the provision of walking and cycle routes, should help to reduce social inequalities by ensuring that people can easily access community services and employment opportunities (SA objective 10.1) from all residential areas, even those without access to a private car.</p> <p>Based on the above, an overall positive effect on the theme of Healthy and Prosperous Communities is likely to result from this policy.</p> <p><u>Transport and Access</u> The policy makes significant provision for the reduction of road traffic and increased use of sustainable modes of transport (SA objective 4). The city centre will experience particular benefits from a reduction in the volume of vehicle traffic passing through as it is currently heavily congested (SA objective 4.2) and there should be positive effects in terms of the improvement and provision of integrated sustainable transport options in central and accessible locations (SA objective 4.3). Encouraging car sharing and the provision of a park and ride scheme should contribute to an overall reduction in the number of vehicles on the city's roads, particularly at peak commuting times. A reduction in vehicle numbers and overall levels of congestion should have a positive effect on road safety (SA objective 4.6). However, although the relief road to be provided should have significant positive impacts in terms of reducing congestion in the city centre, its construction will not make any contribution to reducing overall levels of road traffic; in fact it may encourage continued use of private cars for those journeys that do not involve travelling directly into and out of the city centre.</p> <p>The intended reduction in traffic congestion within the city centre, and enhancement of pedestrian and cycle links should help to providing access to services and facilities (SA objective 7).</p> <p>Based on the above, an overall mixed (significant positive and minor negative) effect on the theme of Transport and Access is likely.</p>						

The Built Environment

Most of this policy is not likely to have an effect on housing provision (SA objective 11). However, the September 2010 Hereford Relief Road Study of Options⁵ states (in Table 4.12) that the preferred inner western route would require the demolition of at least two residential properties on Kings Acre Road, which would result in a negative effect on provision of housing.

The policy stipulates that new developments will be linked to, and accessible by, sustainable modes of transport, for example walking and cycling networks, which should increase the share of such transport modes, thereby having a positive effect on integrated, efficient and balanced land use (SA objective 19.1).

The provision of the relief road should have a positive effect on the quality and character of the city of Hereford (SA objective 20) by reducing noise, air pollution and visual intrusion caused by congestion. An improvement in the environment of the city centre will enhance the setting of historic assets such as listed buildings (SA objective 20.1) and a reduction in vehicle traffic and levels of congestion should have a positive effect in terms of improving the general appearance of the city centre (SA objective 20.4). However, the effects of the relief road on the character and quality of settlements or neighbourhoods in proximity to the western route are uncertain from the Study of Options report, and need to be determined. The Study of Options report states that it is a step towards the Stage 2 Assessment for the route selection (in a process that involves Stages 0 and 1 that are completed already, and a further Stage 3 still to be undertaken), and that further environmental surveys will be undertaken before finalising the Stage 2 assessment report.

Based on the above, an overall mixed effect (positive within the city centre, uncertain for the route of the western corridor of the relief road) on the Built Environment theme is likely.

Resource Consumption and Climate Change

The policy would not have a direct effect on household waste production/reduction (SA objective 12), but will result in excavation of large volumes of soil and earth. The Study of Options report states that excess earthwork materials would be produced for the western route, but they can be used in bunds to screen the road and reduce noise and visual impacts. This would reduce the amount of inert waste requiring disposal, thus having a minor positive effect on SA objective 12.

The policy seeks to result in a reduction in vehicle traffic and an increase in the amount of journeys that are undertaken by sustainable modes of transport such as walking and cycling, which would have a positive effect on fuel consumption (SA objective 14.1) and reduced greenhouse gas emissions (SA objective 16.1). However, the construction of the relief road may have the opposite effect and help to maintain levels of car use as those journeys that do not require travelling directly into and out of the city centre may become faster and more convenient, which would maintain levels of fuel consumption and greenhouse gas emissions. It is uncertain from the findings of the Hereford Relief Road Study of Options what the overall net increase or decrease in traffic flows and carbon emissions would be with or without the relief road on the western route; there is only a reference to an increase in emissions for the eastern route of the relief road. This data analysis should be provided in the next stage of the work.

The policy is not expected to have an impact on the use of clean technologies and water minimisation techniques (SA objective 18.5).

Based on the above, an overall mixed effect (minor positive, minor negative and uncertain) on the theme of Resource Consumption and Climate Change is likely.

The Natural Environment

The construction of the Hereford relief road along the preferred inner western route around the city should help to avoid significant negative effects on biodiversity interests (SA objective 13) that were considered likely to occur if the road was constructed to the east of the city (e.g. on the River Lugg SSSI which is a major tributary of the River Wye SAC and the Lugg Meadows SSSI). However, it is not yet

⁵ Hereford Relief Road. Study of Options. Prepared by Amey UK plc for Herefordshire Council, August 2010.

certain whether there will be significant negative effects on the River Wye SAC from construction of the western route relief road, as it also involves construction of a bridge across the river. Further assessment under the Habitats Regulations Assessment is being undertaken as part of the Hereford Relief Road study, and the findings of the SA and HRA for the Core Strategy will need to be updated to reflect the findings of that study once available. The supporting text to the policy mentions the need to mitigate the potential impacts of the western relief road on biodiversity in the River Wye SAC, e.g. through the use of wide span structures and avoiding direct working in the watercourse (advice taken from the Study of Options report for the relief road); however, this is not referred to as a requirement within the policy itself which makes no mention of the potential adverse impacts on the River Wye.

The Study of Options report for the Hereford Relief Road identified that the favoured inner western route for the road may be constrained by significant adverse effects on the landscape character of the River Wye at the river gorge, indicating that there may be a significant negative effect on the landscape quality (SA objective 15) as a result of the policy which states that this option will be pursued. It is assumed that the further environmental surveys planned as part of the Hereford Relief Road Stage 2 Assessment will consider the extent to which these significant negative effects can be avoided or mitigated.

The policy is not expected to have an effect on the risk of flooding within Hereford (SA objective 17), as the preferred western route does not pass through areas at significant risk of flooding, whereas the eastern routes do.

The provision of the relief road should have a positive effect on reducing air pollution from vehicle traffic within the city centre (SA objectives 18), which is of particular importance as the city centre is subject to an Air Quality Management Area designation. A reduction in vehicle traffic within the city centre should also help to reduce noise pollution (SA objective 18.1). However, as noted above, it is uncertain whether there would be a net overall increase in vehicle emissions from construction of the relief road, which may decrease air quality outside of the city centre.

Based on the above, an overall mixed effect (uncertain significant negative and some minor positive) on the Natural Environment theme is likely.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version
Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

No specific recommendations are made in relation to this theme.

Transport and Access

No specific recommendations are made in relation to this theme.

The Built Environment

The effects of the relief road on the character and quality of settlements or neighbourhoods in proximity to the western route need to be determined as part of finalising the Stage 2 assessment report for the Hereford Relief Road. The loss of residential properties also needs to be acknowledged with reference to how and where they would be replaced.

No amendments were made to the policy in relation to this recommendation. Details to be included within the Hereford Area Plan.

Resource Consumption and Climate Change

It is uncertain from the findings of the Hereford Relief Road Study of Options what the overall net increase or decrease in traffic flows and carbon emissions would be with or without the relief road on the western route; there is only a reference to an increase in emissions for the eastern route of the relief road. This data analysis should be provided in the next stage of the work.

No amendments were made to the policy in relation to this recommendation. Details to be included within the

Hereford Area Plan.

The Natural Environment

Specific mention should be made within the policy itself of the need to avoid or mitigate potential impacts on the biodiversity and landscape character of the River Wye which runs through the city centre as a result of the development of the relief road. Further environmental surveys planned as part of the Hereford Relief Road Stage 2 Assessment will be drawn upon in the SA and HRA to determine the extent to which these significant negative effects can be avoided or mitigated.

Text has been added to the policy stating that all new infrastructure should avoid or mitigate the potential impacts on the biodiversity and landscape character of the River Wye SAC.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H2: Hereford Movement, as included in the consultation document.	0	+	++/-	+/-?	+/-?	+/-?

Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect.

Table 5: Appraisal Findings for Relief Road Options

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Western relief road (favoured inner corridor)	+?	+/-	++/-	+/-	-	--?
Eastern relief road (favoured inner corridor)	+?	+/-	+/-	+/-	-	--?

Education and Employment

The provision of the relief road in either route option (western or eastern inner corridor) may increase employment opportunities in Herefordshire (SA objective 1), both directly as a result of jobs being created during construction of the road, and indirectly by stimulating employment in companies who are involved in the project, e.g. providing building materials. However, the extent of this potential impact will depend on whether local companies and labour are to be used in the project, and any such effects will be temporary, lasting only for the duration of the construction work. In addition, the presence of the relief road (regardless of the location) may have further indirect positive impacts on employment creation, by stimulating the local economy as a result of the improved transport links and ease of movement in and around the city.

Any job creation resulting from the construction project may also increase the opportunities available for work-based training and skills development (SA objective 2), although this potential effect is again uncertain as it will depend on the number and type of positions created as a result of the project and again, the potential effect would only be experienced in the short-term.

Neither of the relief road route options is considered likely to affect the other SA objectives (3, 7 and 8) within this theme.

Based on the above, a potential but uncertain positive effect is associated with both of the options in relation to the theme of Education and Employment.

Healthy and Prosperous Communities

The construction of the relief road in either the eastern or western location should have a positive effect on public health (SA objective 5) as a result of improved air quality in Hereford due to reduced congestion in the city centre. However, the relief road (regardless of location) may also lead to some adverse effects on health by encouraging continued car use instead of switching to sustainable modes of transport such as walking and cycling which can increase levels of activity amongst the local population. Reducing the congestion in the city centre caused by longer-distance traffic movements may make driving through Hereford for shorter journeys more feasible and appealing, and the presence of the relief road in either location may encourage people to continue using a car to access the city centre.

Either an eastern or western relief road would help to support sustainable regeneration (SA objective 7.4) by improving the quality of the public realm within Hereford city centre, as congestion and the associated noise and pollution would be reduced and positive community interaction encouraged. However, where the two route options for the relief road pass within close proximity of new or existing residential development around Hereford, the quality of those areas may be compromised, therefore having a negative effect on this objective. Whilst both routes would pass close to the Holmer East and Bullinghope urban expansion sites, the proposed western inner corridor route also passes near to the development planned at Whitecross, Three Elms and Holmer West and the eastern route would, pass within close proximity of the existing residents at Aylestone, which may affect levels of amenity there.

The provision of a relief road is not expected to have any direct impact on crime and anti-social behaviour (SA objective 9).

The provision of a relief road in general, either along the eastern or western route, may help to improve access to services and opportunities, including jobs, (SA objective 10.1) within Hereford itself by reducing congestion in the city and making journeys shorter and more convenient. Under the Preferred Options for development at Hereford, the main site for new employment development is at Three Elms (10ha) and Holmer East (5ha). Both of the potential routes for the relief road would enable improved access to the Holmer East site from areas to the south of the city, without having to drive through the city centre; however, only the western relief road route would pass in close proximity to the Three Elms site to the west of the city, thereby improving access to the employment to be developed there. The eastern route would, however, pass within close proximity of the existing residents at Aylestone, which may improve levels of accessibility for people living there.

Based on the above, a mixed (minor positive and negative) effect is likely to result from both route options in relation to the theme of Healthy and Prosperous Communities.

Transport and Access

Both of the potential route options for the relief road would have a significant positive effect in terms of a reduction in road traffic and congestion within the heavily congested Hereford city centre (SA objective 4); however there may be negative effects on the increased use of sustainable modes of transport (SA objective 4.2) as car use may become even more appealing due to a reduction in congestion, making car journeys faster in the city and more convenient.

Construction of the western route would mean that the relief road would pass within close proximity to the new developments at Holmer West, Three Elms and Whitecross which are proposed under the Preferred Options for Hereford. As such, residents of these areas would be better able to access the road and make use of it to avoid the congested city centre than under the eastern route, having a more significant positive effect on reducing traffic in the city centre (SA objective 4). The road would pass within close proximity of the proposed development sites at Bullinghope and Holmer East under either option. However, a relief road along either route is not likely to reduce road traffic in general, indeed it may increase travel by car, although this is uncertain as traffic forecast data is not available.

Reducing congestion within Hereford, and therefore enhancing the quality of the urban environment due to improved air quality and visual amenity, is likely to have a positive effect on the promotion of the area to visitors (SA objective 6.2) as the city's image will be enhanced and it will be easier for visitors to access the city and move around within the central urban area.

Neither of the options is considered likely to have an effect on sustainable regeneration (SA objective 7.1).

Based on the above, a mixed (significant positive and minor negative) effect is likely to result from the western route option, and a mixed (minor positive and negative) effect is likely to result from the eastern route option in relation to the theme of Transport and Access.

The Built Environment

The Study of Options report for the relief road⁶ found that the western route would necessitate the demolition of at least two residential properties on Kings Acre Road to the west of Hereford, thereby having a negative effect on housing provision in that location (SA objective 11). Based on the inner western and eastern corridor routes assessed in the Study of Options report, the eastern route would not necessitate any such residential demolitions. The exact location of the western inner route is currently unclear at the south west of the city, where the proposed linkages would need to be amended from the routes currently mapped in the Study of Options report⁷. As such, it is uncertain whether any other properties would require demolition in this area of the route, as this cannot be confirmed at this stage. However, both options should have a positive effect on improving the quality of the wider built environment (SA objective 11.6) within Hereford, as a result of traffic congestion in the city centre being reduced.

Both of the route options could have a negative effect on efficient, integrated and balanced land use (SA

objective 19), as greenfield land would be taken for construction of the relief road.

The provision of the relief road in either location should have a positive effect on the quality and character of Hereford city centre (SA objective 20) as the reduction in congestion that should result would reduce levels of noise, air pollution and visual intrusion. Under the eastern route, the relief road would pass within close proximity of Rotherwas Chapel which is a Scheduled Ancient Monument, therefore may have an adverse effect on its setting (SA objective 20.1). The western route would pass within close proximity of the Huntingdon Conservation area, potentially affecting its setting (SA objective 20.1). Both routes would pass within very close proximity of a large number of listed buildings, and could have a negative effect on these features of historical and cultural value.

Based on the above, a mixed (minor positive and negative) effect is likely to result from both route options in relation to the theme of the Built Environment, although the Eastern route scores slightly more positively due to no requirement for housing demolition.

Resource Consumption and Climate Change

Both of the options for the route of the relief road are likely to result in waste production during construction, due to the scale of the project involving excavation of large volumes of soil and earth (SA objective 12). The Study of Options report states that excess earthwork materials would be produced for the western route, but they can be used in bunds to screen the road and reduce noise and visual impacts. This would reduce the amount of inert waste requiring disposal, thus having a minor positive effect on SA objective 12. There is no excess earthwork materials predicted for the eastern route, in fact it would require 400,000 m³ of fill material, which could have a negative effect on the consumption of natural resources (SA objective 14.2). However, the construction of the relief road (in either location) would also require the use of large amounts of aggregate materials for the road surface, thus both routes would have a negative effect on the consumption of natural resources (SA objective 14.2), unless recycled or secondary aggregates were used in constructing the road.

Neither of the route options for the relief road is expected to have a direct effect on reducing Herefordshire's vulnerability to climate change (SA objective 16). However, Herefordshire's contribution to climate change (SA objective 16.1) could be increased if road transport remains an appealing option for transport around the county as a result of the construction of the relief road along either route, which would make travel both around and into and out of Hereford more convenient. Further adverse effects may also result from either route in relation to this objective as a result of the transportation of materials for the construction of the road itself. However, this would be a shorter-term increase in traffic during construction, and the extent of the potential adverse effect will depend on the source location of the materials used, and on the route taken to either site.

Both the eastern and western options for the relief road may contribute to air pollution in Herefordshire (SA objective 18.5) by encouraging the ongoing use of vehicle transport, despite reducing the concentrated air pollution within the city centre.

Based on the above, an overall negative effect is likely to result from both route options in relation to the theme of Resource Consumption and Climate Change.

The Natural Environment

The environmental assessment undertaken as part of the Study of Options report for the relief road concluded that the eastern route would have a more significant negative effect on biodiversity assets than the western route as it would encroach on the floodplain of the River Lugg which is a Special Wildlife Site and a SSSI (SA objectives 13.1 and 13.2), and a major tributary of the River Wye SAC. The report states that the eastern route would be unlikely to be approved as it would be unlikely to meet the Habitats Regulations, which require that development will not have an adverse effect on the integrity of European sites (SACs/SPAs). As a result, a specific Habitats Regulations Assessment (HRA) is being undertaken for the relief road options, although the findings are not yet available. The likely effects on biodiversity resulting from the western route were found to be less severe in the Study of Options, and able to be mitigated. This option would also require the River Wye to be crossed; however, if the bridge structure spans the watercourse widely and there is no direct working within the river, it may be possible to avoid

direct physical impacts on the site. However, the noise, vibration and other potential non-physical effects that would result from construction activities may still have a negative effect on species at the site (SA objective 13.2), and the results of the relief road HRA should help to determine whether these effects can be avoided, or the specific mitigation requirements that need to be implemented.

The Study of Options report for the Hereford Relief Road identified that the inner western route for the road may be constrained by significant adverse effects on the landscape character of the River Wye at the river gorge, indicating that there may be a significant negative effect on the landscape quality (SA objective 15) as a result of this option being pursued. It is assumed that the further environmental surveys planned as part of the Hereford Relief Road Stage 2 Assessment will consider the extent to which these significant negative effects can be avoided or mitigated. Conversely, the eastern route was found to have a lesser impact on landscape quality, with minimal landscape impacts around the Rivers Wye and Lugg.

The eastern route for the relief road would be likely to have a significant negative impact on the risk of flooding and the resulting detriment to public well-being (SA objective 17) as a significant proportion of the route runs through areas of high flood risk (flood zones 2 and 3). The western route would pass through two small areas of high flood risk (immediately adjacent to the River Wye and at the north west of the city); however the potential negative effects in terms of flood risk are considered to be far less than along the eastern route.

Both of the relief road options should help to reduce air pollution within Hereford city centre, including the area where there is currently an AQMA in place, thereby having a positive impact on the reduction of pollution (SA objective 18.1). However, the construction of the relief road may also encourage the continued use of vehicle transport as a result of increasing the convenience of such travel in the Hereford area, thereby contributing to overall air pollution issues in the county.

The relief road Study of Options report found that the western route would require greater earthworks activities due to the topography of the land, which may have a negative effect on soil quality (SA objective 18.3).

Based on the above, an overall significant negative effect is likely to result from both route options in relation to the theme of the Natural Environment, although this is uncertain until the results of the relief road HRA are available.

Conclusions and Recommendations

Education and Employment

The SA findings are equally positive for both the eastern and western routes in relation to this theme, with several of the SA objectives being unaffected. Any potential employment and/or training opportunities that may arise from the construction project would be of more benefit within Herefordshire if local contractors and suppliers can be used where possible.

Healthy and Prosperous Communities

In either location, the relief road should be designed and constructed to take into account the potential adverse effects on amenity; however this issue may be of particular importance under the western route where the road would pass within very close proximity of a number of the new developments proposed under policy H4. Where possible, any potential noise or visual impacts should be mitigated by appropriate screening of the road from residential properties and employment sites, e.g. by the use of appropriately sited vegetation.

The SA findings support the approach taken within policy H2 of delivering the relief road alongside a package of measures designed to encourage and facilitate the increased use of sustainable transport modes such as walking and cycling, in order that levels of car use are not maintained or even increased by the improvements to the road network. This should help to ensure that levels of activity amongst the local population are increased, securing the associated benefits for health and well-being.

Transport and Access

As with the above theme, the SA findings support the approach taken within policy H2 of delivering the relief road alongside a package of measures designed to encourage and facilitate the increased use of sustainable transport modes such as walking and cycling, in order that levels of car use are not maintained or even increased by the improvements to the road network that would result from either the eastern or western routes.

The SA findings support the development of the relief road along the western route in relation to access improvements, as the employment opportunities to be provided at Holmer East and Whitecross will be easily accessible from the relief road.

The Built Environment

The SA findings highlight the loss of three residential properties if the relief road were to be constructed along the western route. Where the route has yet to be finalised (to the south west of the city), it should be routed so as to avoid the loss of any further properties if at all possible.

Under both potential routes, the relief road may compromise the setting of listed buildings and other sites of heritage value. The road should be designed and constructed to take into account the potential adverse effects on amenity. Where possible, any potential noise or visual impacts should be mitigated by appropriate screening of the road.

Resource Consumption and Climate Change

Sustainable design and construction methods should be used within the relief road development, including waste minimisation measures. Re-use of excavated earthworks within the road construction, and use of recycled or secondary aggregates for the road surfacing would minimise consumption of natural resources. Where primary aggregates are required, they should be sourced as locally as possible to help reduce the potential impacts of the increased road transport during the construction phase.

Again, the delivery of the relief road (on either route) in conjunction with a package of sustainable transport measures, as proposed under policy H2, should help to reduce the potential air quality impacts arising from the likely improvements to the convenience and appeal of car use in and around Hereford that a relief road would bring.

The Natural Environment

At this stage, the SA findings favour the construction of the relief road along the western route as opposed to the eastern route in relation to the potential impacts on biodiversity and flood risk. However, the potential for significant negative effects on the River Wye SAC from construction of the road along either route are still being assessed through a HRA being undertaken as part of the Study of Options. The findings from that HRA are not yet available, and will need to be considered in determining stringent requirements that would need to be implemented, particularly in relation to the bridge construction over the River Wye. Although the landscape impacts are likely to be more significant along the western route, it may be possible to reduce such impacts through appropriate mitigation measures such as the use of design and screening, which should be required as part of the policy (H2). The road development should seek to build in flood management measures at the design stage, in line with PPS25.

Table 6: Appraisal findings for policy H3

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H3: Growth Distribution Policy (first draft version)	++	+	++	++/-	+/-	+/-
<p><u>Education and Employment</u></p> <p>The location of new employment provision to the north of the city should help to balance out the job opportunities available geographically with the location of the available workforce (SA objective 1) and to enhance accessibility for employees via sustainable transport modes from a wider range of residential areas (SA objective 1.2). The provision of employment opportunities may in turn increase the available opportunities for work-based training and skills development (SA objective 2.1) although the potential for this benefit is dependent on the nature of the employment provision which is not specified.</p> <p>The allocation of specific areas of employment land, including 5ha at Holmer east, 10ha at Three Elms and continued development at Rotherwas, should have a significant positive effect on enabling a sustainable economy and continued investment (SA objective 3). The policy states that development will adhere to high standards of sustainable construction and will include the use of renewable energy, which indicates that there could be positive effects on the efficient use of natural resources within employment sites and properties (SA objective 3.2).</p> <p>The growth planned within Hereford may offer opportunities to reduce the number of vacant properties, if disused buildings can be redeveloped for commercial or residential use, having a positive effect on sustainable regeneration (SA objective 7.3).</p> <p>The provision of new and expanded education facilities for residents (which should be of a good quality, being newly provided) may help to raise education attainment and should help to meet current and future demand (SA objective 8.1), which is likely to increase as a result of the extensive housing development planned within Hereford and in rural service centres in proximity to Hereford.</p> <p>Based on the above, an overall significant positive effect on the Education and Employment theme is likely.</p> <p><u>Healthy and Prosperous Communities</u></p> <p>The provision of green infrastructure and recreation facilities within new development across Hereford should increase the opportunities available for sport and physical activity and encouraging walking and cycling in place of car use will have further health benefits and encourage local people to have more active and healthy lifestyles (5.3). The growth proposed through the policy should have a positive impact on sustainable regeneration, with the development proposed being an opportunity to pursue design and construction techniques that will result in the provision of high quality public spaces (SA objective 7.4).</p> <p>The policy is not expected to have a direct effect on preventing crime and antisocial behaviour (SA objective 9). The provision of new and expanded community facilities within new development should have a positive impact on social inclusion and reducing exclusion, and the increased linkages planned (e.g. walking and cycling routes) should enhance levels of access to these facilities (SA objective 10.1) particularly for more deprived households who may not have access to a car.</p> <p>Based on the above, an overall positive effect on Healthy and Prosperous Communities is likely.</p> <p><u>Transport and Access</u></p> <p>The emphasis that the policy places on achieving a modal shift away from dependency on private car use should have a significant positive effect on reducing car traffic and increasing the proportion of journeys made by sustainable modes of transport (SA objective 4). The fact that development is proposed in three different areas around the city should help to reduce the need to travel (SA objective 4.1) and the heavily</p>						

congested city centre should experience a reduction in traffic volumes as measures such as improved walking and cycling links are put in place (SA objective 4.2), in combination with the relief road proposed in Policy H2.

The pattern in which development is to be distributed should enhance people's ability to access services and facilities (SA objective 6) as development is not focussed on one side of the city only, and a larger number of residential properties will be within reasonable proximity of one of the newly provided employment opportunities and facilities to be developed. The improvement of transport links and a reduction in city centre congestion may make the city more appealing for tourists and local visitors (SA objective 6.2), as will the provision of improved recreation facilities.

The provision of new and expanded education, community and recreation provision at three broad locations across Hereford is expected to be in compliance with the part of the policy that states that a high level of renewable construction will be achieved, including the use of renewable energy, therefore having a positive impact on sustainable regeneration (SA objective 7.1).

Based on the above, an overall significant positive effect on Transport and Access is likely.

The Built Environment

The provision of a total of 4,500 new homes in urban extensions to Hereford is likely to have a significant positive effect on the provision of housing (SA objective 11). The fact that the housing to be provided is new means that it should be of a high quality (SA objective 11.1) and 35% is to be affordable, which should increase the number of people able to access the new homes (SA objective 11.2). The measures included within the policy to improve energy efficiency and minimising resource usage through sustainable construction should have a positive effect on reducing fuel poverty (SA objective 11.4). The increased connectivity between different areas of the city, by providing walking and cycle linkages, should help to enhance the sense of community within the city, and as the new development planned should be of a high quality due to the use of sustainable construction techniques, the quality of the overall built environment should be improved (SA objective 11.6).

The development planned lies outside of the existing built up area, and will take place mainly on greenfield land which may offer few opportunities for reusing existing buildings, therefore having a negative effect on the efficient use of land (SA objective 19). However, the measures in place to ensure the accessibility of sites by sustainable transport modes, e.g. the provision of walking and cycle routes, should have a positive effect on integration and reducing the need to travel (SA objective 19.1). The use of sustainable construction will improve resource efficiency within the new development (SA objective 19.2).

The policy aims to integrate new development with the existing urban environment and the countryside, which should mean that it is designed so as to be appropriate in form, scale and design in relation to its setting (SA objective 20.2). The new development is likely to contribute to overall improvements in the quality of the built environment (SA objective 20.3) and should help to enhance the overall character and appearance of the city (SA objective 20.4), as it is required to be constructed to high standards and to be in keeping with its surroundings.

Based on the above, an overall mixed (significant positive or minor negative) effect on the Built Environment theme is likely to result from this policy.

Resource Consumption and Climate Change

No detail is given in the policy with regards to what 'sustainable construction' will include, for example whether there will be specific measures in place to minimise waste production in the new development, therefore the likely impacts of the development proposed on waste reduction and rates of recycling are uncertain. However, development of the scale proposed in this policy will inevitably result in an increase in waste production overall, therefore having a negative effect on levels of waste from households and businesses (SA objective 12.2). Providing space for adequate waste storage in new development to encourage recycling is not specifically addressed in the policy. This is also not covered by the other general policies on waste within the Core Strategy, but could be included in the general sustainable design policy which is still to be drafted.

The policy states that the new housing to be developed will be built using sustainable construction techniques and will include the use of renewable energy, which should have a positive effect on the

efficient use of energy and other natural resources (SA objective 14), although the type and proportion of renewable energy that may be utilised is not specified at this stage.

Increasing the proportion of journeys that can be undertaken by walking and cycling instead of by car, e.g. by providing walking and cycle routes to increase connectivity between different areas of the city, is likely to reduce greenhouse gas emissions from transport (SA objective 16.1). However, depending on the type of activities to be undertaken on the allocated employment land, there may be an increase in emissions from industry, although these would be strictly regulated under the Environment Agency's environmental permitting regime. The fact that renewable energy usage is to be incorporated into the new development should have a positive impact on increasing the proportion of energy overall that is sourced from renewable and low carbon sources (SA objective 16.2); however the amount of energy that is to be produced in this way is not specified and it may be a relatively minor proportion of the overall increase in energy consumption that will inevitably occur from large-scale development, as proposed through this policy.

The emphasis placed on public transport use should help to reduce air pollution (SA objective 18), as the developments are to be integrated with the existing urban area and links such as cycle and walking routes should connect developments with other areas.

Based on the above, an overall mixed (minor positive and negative) effect on the Resource Consumption and Climate Change theme is likely to result from this policy.

The Natural Environment

The policy makes very little reference to the natural environment and of the need to conserve and enhance biodiversity in and around the city. The provision of green infrastructure within new development should have a positive impact on species protection (SA objective 13.2) by increasing habitat connectivity and maintaining wildlife corridors (SA objective 13.3). None of the development sites that are identified within the policy are immediately adjacent to a designated nature conservation site; however all development within reasonably close proximity of the River Wye SAC may result in increased pressure from recreation activities from the growing local population, or from noise and vibration from any increase in vehicle traffic that may still occur despite the measures in place to encourage sustainable transport use. As such, negative effects on a designated European site may occur (SA objectives 13.1 and 13.2) and this is being considered in more detail through the Habitats Regulations Assessment for the Core Strategy.

The policy requires the planned urban extensions to be well integrated with the surrounding countryside, which should have a positive effect on landscape quality (SA objective 15), although the term 'landscape' is not directly used. However, the fact that large-scale development is proposed at locations on the outskirts of the city, in close proximity to the open countryside, means that an adverse effect on the landscape cannot be ruled out. The specific landscape character areas that would be affected are considered under Policies H4-H6 below.

If the sustainable construction techniques that the policy refers to are to include the use of SUDS (SA objective 17.3), there should be positive effects on reducing the risk of flooding within Hereford (SA objective 17.1); however this is not specified within the policy wording. The quality of the River Wye SAC and the designated species within it, which runs through the city centre, may be significantly negatively affected by any increase in demand for waste water treatment (SA objective 18.2), as the two sewage treatment works that serve the city discharge into the river, and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from the new housing to be provided in Hereford.

Based on the above, an overall mixed (minor positive and significant negative) effect on the Natural Environment theme is likely to result from this policy.

Discounted Options

Policy H3: Discounted Option – Develop land over two plan periods and increase the total amount of homes

Very little specific detail was given for this discounted option in the consultation response to the Place Shaping Paper with regards to the precise location of development, and how much of the additional housing development would take place within the current plan period and how much would take place in the next plan period. However, increasing the number of housing allocations in Hereford would have some general sustainability effects which are outlined below.

A significant increase in the number of new homes to be provided in Hereford (12,000 over two plan periods as opposed to 5,300 currently over one period) would significantly increase the city's population, which would increase pressure for jobs, school places and community services and facilities in and around Hereford. If provision is not made to an adequate extent to meet these needs, the additional housing development could have a negative effect on a wide range of sustainability objectives associated with the themes of Education and Employment, Healthy and Prosperous Communities and Transport and Access.

The general increase in population may compound the congestion issues that the city currently faces as a result of increased traffic movements; thereby having an adverse impact on air pollution and the quality and amenity of the built environment. However, if the development is delivered in conjunction with a package of sustainable transport measures and the provision of a relief road, as set out in policy H2, such impacts may be mitigated.

The likely effect of the option on the Resource Consumption and Climate Change theme is currently uncertain without more detailed information being available about the specific type and design of the development that would result from the option.

In terms of the likely effects on the Natural Environment theme, the option would require housing development to extend into land which SHLAA identified as having significant constraints. This is likely to involve impacts on the landscape, which may be significantly adversely affected by larger-scale development in constrained locations, or other constraints may include land being at higher risk of flooding, where development would have an adverse impact for this reason. However, without more detail about the precise areas of land that may be used for housing development under this option, and about the nature of the constraints identified in those areas, it is not possible to accurately assess the likely sustainability effects of this option on the natural environment.

Policy H3: Discounted Option – Development predominantly in the south

Very little specific detail was given for this discounted option in the consultation response to the Place Shaping Paper with regards to the precise location, nature and extent of the development proposed. Therefore, only general sustainability effects of focussing a larger proportion of new housing development in the south of the city have been predicted. In terms of the SA objectives in the Education and Employment and Healthy and Prosperous Communities themes, focussing more housing within close proximity of the key employment area around Rotherwas would enable relatively easy access to the job opportunities there, in particular via sustainable modes of transport such as walking and cycling.

However, the River Wye forms a physical barrier between the south of the city and the city centre, effectively separating the development site from the central urban area. Depending on the provision of alternative sustainable transport links into and out of the city centre, and on the construction of the proposed relief road, the A49 river crossing may become even more congested by residents from the south of the city travelling to and from jobs and facilities within the city and to the north. The extent of this potential negative effect on the SA objectives in the Transport and Access theme would also be influenced by the provision of community services and facilities within the new residential development, which may mitigate to some extent the need to travel into the city centre; however this is not specified within the option.

The likely effects of the option on the Built Environment and Resource Consumption and Climate Change themes are currently uncertain without more detailed information being available about the development that would result from the option.

In terms of the Natural Environment objectives, focussing a larger area of housing development to the south of Hereford would direct more of the development within close proximity of the River Wye SAC which may be affected by increased traffic movements nearby, and from the noise, vibration and light etc. associated with construction of new housing in proximity to the river. Light and noise may continue to

have negative effects on the qualifying features (for example otters) of the River Wye SAC once the housing has been developed. In addition, the area around Lower Bullingham to the south of Hereford is classed as being of medium-high landscape sensitivity, indicating that increasing the extent of development in this area is likely to have a negative impact on the landscape. The Strategic Housing Land Availability Assessment (SHLAA) indicated that this type of adverse impact was very likely to result from development predominantly in the south of Hereford.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version

Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

No specific recommendations are made in relation to this theme.

Transport and Access

No specific recommendations are made in relation to this theme.

The Built Environment

No specific recommendations are made in relation to this theme.

Resource Consumption and Climate Change

The wording of the sixth bullet point within the policy is unclear – it implies that there is an aim to meet climate change targets, but does not specify what targets this refers to. The wording of the sentence should be revised to ensure that the meaning is clear and that any target referred to is fully identified. Providing space for adequate waste storage in new development to encourage recycling is not specifically addressed in the policy. This is also not covered by the other general policies on waste within the Core Strategy, but could be included in the general sustainable design policy which is still to be drafted.

Text has been added to the policy, stating that Hereford's growth will ensure high quality telecommunications and adequate energy and water supply and sewerage capacity and provide adequate space of waste recycling storage. However, no amendment has been made in relation to the climate change targets mentioned in the policy – this is to be addressed within a general Core Strategy policy which has not yet been drafted.

The Natural Environment

The policy should make reference to the need to conserve and enhance natural environmental assets, including the River Wye SAC in particular, from any potentially adverse impacts of the large-scale development proposed through this policy and should make specific use of the word 'landscape' instead of referring only to the 'countryside'. In order to avoid significant effects on water quality in the River Wye, Herefordshire Council needs to ensure that sufficient sewage treatment infrastructure/capacity is provided prior to development of the additional 4,500 homes in the new urban extensions.

Text has been added to the policy, stating that Hereford's growth will achieve a high level of integration into the existing urban fabric and the surrounding landscape particularly ensuring the protection and enhancement of natural assets including the River Wye.

The SA findings therefore support the distribution of growth in Hereford as set out under the Preferred Approach H3.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H3: Growth Distribution, as included in the consultation document.	++	+	++	++/-	+/-	+/-
<i>Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect.</i>						

Table 7: Appraisal findings for policy H4

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H4: Northern Urban Expansion (first draft version)	++?	+	+	++/-	+/-	+/-
<p><u>Education and Employment</u></p> <p>The provision of 5ha of employment land at Holmer east should have a significant positive impact on employment provision (SA objective 1) and the fact that this is to be located relatively close to the housing development and Park and Ride site planned at Holmer west should enhance the accessibility of the site to potential employees, particularly via sustainable modes of transport such as walking and cycling (SA objective 1.2). However, the A49 presents a physical barrier between the sites, and so walking and cycling routes will need to be able to cross this busy road safely and conveniently if easy access by sustainable transport modes is to be enabled (SA objective 1.2). It is not clear what type of employment-related activities would be located at Holmer east, e.g. what type of commercial or industrial enterprises might offer employment opportunities, therefore it is not certain whether there would be opportunities to diversify from the existing available job opportunities available in and around Hereford (SA objective 1.4).</p> <p>The provision of employment opportunities may in turn increase the opportunities available for work-based training and skills development (SA objective 2.1), although the extent of this potential effect is uncertain without more information about the nature of employment opportunities that are likely to be provided at the site, and therefore the likelihood of them entailing training and personal development opportunities.</p> <p>It is not currently clear from the policy whether the employment site at Holmer east will be developed to high environmental standards; this issue is currently referred to only in relation to the housing proposed at Holmer west. As such, the likely effect of the policy on the maintenance of a sustainable economy (SA objective 3) is unclear. The policy should specify that all development to take place within the northern urban expansion is to be completed to high environmental standards, e.g. using energy efficient design etc., rather than just the residential development at Holmer West.</p> <p>The neighbourhood community hub that is to be provided within Holmer west is to include retail facilities; therefore a positive effect in terms of the range of independent, competitive and national retailers (SA objective 7.2) is likely, depending on the type and number of shops that are developed.</p> <p>The provision of a new 420 place primary school should help to meet the increasing demand for school places that is expected to result from the development of 1,000 new homes at Holmer west (SA objective 8.1); however it is not clear whether provision will be made to meet demand for secondary/higher education places as the policy states that expansion may be needed at Aylestone College, and it is not clear whether the capacity for such expansion exists or whether this will be a requirement of the development taking place.</p> <p>Based on the above, an overall significant positive effect is likely in relation to the theme of Education and Employment, although there are currently some uncertainties associated with the effects.</p> <p><u>Healthy and Prosperous Communities</u></p> <p>The provision of a health centre and child outreach centre within the urban extension should ensure that residents of the new housing developed at Holmer west have access to health services nearby (SA objective 5.1), which they should be able to access via walking or cycling due to the provision of greenways which would also help to increase overall levels of activity amongst local people by increasing the proportion of all journeys that can be undertaken on foot or by bicycle (SA objective 5.3). Incorporating sports and play facilities and open spaces within the Holmer west site will also help to</p>						

ensure that facilities are available for local people to participate in activities locally.

The new development should have a positive effect on the overall quality of the public realm (SA objective 7.4), as the development should be of a high quality and the provision of open spaces will help to ensure that the development comprises a well-designed and visually attractive environment.

The policy is not expected to have a direct effect on preventing crime and antisocial behaviour (SA objective 9), although opportunities to 'design out' crime could be included within the new developments.

The provision of new and expanded community facilities within the new development should have a positive impact on social inclusion and reducing exclusion, and the increased linkages planned such as walking and cycling routes should enhance levels of access to these facilities (SA objective 10.1) particularly for more deprived households who may not have access to a car.

Based on the above, an overall positive effect is likely to result from this policy in relation to the theme of Healthy and Prosperous Communities.

Transport and Access

The measures included within the policy to encourage sustainable transport use should have a positive impact on the reduction of traffic and congestion by increasing the proportion of journeys made by sustainable transport (SA objective 4). The park and ride facility which is proposed in close proximity to the site should have further positive effects, reducing the flow of vehicle traffic into and out of the city centre. A reduction in traffic congestion should help to improve road safety and reduce the number and risk of accidents (SA objective 4.6). The Holmer east site lies in close proximity to the railway line; therefore depending on the provision of appropriate infrastructure and on the nature of activities to be located at the allocated employment land there, there may be opportunities to transport freight via rail rather than road.

The provision of new community facilities within the urban extension will increase the type and quality of facilities available and will increase levels of access to such services for local people (SA objective 6.1). The fact that the services will be provided within the same site as the residential development should ensure that they are accessible via transport modes such as walking or cycling rather than relying on car travel.

Although the policy states that energy efficiency standards will be met within the residential development at Holmer west, it does not mention whether such standards are to be incorporated into the supporting development such as shops and community facilities or at the employment site at Holmer east; therefore the likely effect on sustainable regeneration (SA objective 7.1) is uncertain. The policy should specify that such measures will be implemented in all development proposed, not just the housing development.

Based on the above, an overall positive effect is likely in relation to the theme of Transport and Access, although some uncertainties are associated with some of the objectives.

The Built Environment

The provision of 1,000 new homes at Holmer west will have a significant positive effect on housing provision (SA objective 11.1), and the fact that 35% are to be affordable will have additional positive impacts by increasing the proportion of people to whom they will be available (SA objective 11.2). The high energy efficiency standards to be met by the development should help to reduce energy costs and fuel poverty (SA objective 11.4) and will have a positive effect in terms of the use of sustainable design techniques (SA objective 11.5).

The location of the housing means that access to the city centre to the south should be relatively convenient, particularly as greenways are to be provided to link the site with the main urban area, thereby having a positive effect in terms of the appropriate location of development (SA objective 19.1). However, the fact that the development is proposed on greenfield land will have an adverse effect on reusing previously developed land and the potential to reuse existing buildings will be much lower than if development was taking place on brownfield land (SA objective 19.1). The proposal states that the housing to be developed will meet high standards of energy efficiency; therefore will have a positive effect in terms of the use of sustainable and resource efficient design (SA objective 19.2), although other aspects are not covered such as waste minimisation, re-use of materials, water efficiency etc.

There are a number of listed buildings and a Scheduled Ancient Monument (SAM) in close proximity to the site, the setting of which may be adversely affected by development (SA objective 20.1) depending on its design and precise location in relation to such features, and these would need to be considered within the detailed master planning for the urban extensions. The development does seek to incorporate open spaces and green infrastructure which should help to increase the overall quality of the local environment and have some positive effects on biodiversity and sense of place (SA objective 20.3).

Based on the above, a mixed (significant positive and minor negative) effect is likely to result from this policy in relation to the Built Environment theme.

Resource Consumption and Climate Change

The policy does not make any specific mention of the issue of waste production or disposal. Development on the scale proposed within the policy will inevitably result in an increase in waste production (SA objective 12.2); however it is not clear whether measures such as recycling facilities or storage space for recyclable materials are to be included in the development and therefore whether a positive effect on the promotion of re-using, recovering and recycling may be achieved (SA objective 12.3). This is also not covered by the other general policies on waste within the Core Strategy.

It is inevitable that development on the scale proposed here will result in an overall increase in energy consumption. However, the policy states that the 1,000 new homes to be provided will be built to energy efficiency standards (SA objective 14.1), but does not refer to any similar requirements in relation to the employment site at Holmer east or for the community facilities to be developed to support the housing. There is also no mention of incorporating renewable energy installations within the development.

The requirement for SUDS to be incorporated into the green infrastructure planned for the development will help to reduce vulnerability to impacts of flooding, which is likely to increase as a result of climate change, and the provision of the green infrastructure will help to retain a certain proportion of land as permeable, in order to maintain and increase rates of infiltration (SA objective 16).

The promotion of sustainable transport use should help to reduce greenhouse gas emissions from road transport (SA objective 16.1) and therefore have a positive effect in terms of reducing levels of air pollution (SA objective 18). However, the actual potential for decreases in road traffic likely to result from the sustainable transport measures proposed in the policy and in Policy H2 is uncertain.

Based on the above, an overall mixed (minor positive and negative) effect is likely in relation to the theme of Resource Consumption and Climate Change.

The Natural Environment

The policy makes little mention of the need to conserve and enhance natural environmental assets in and around the northern urban expansion area. Neither of the development sites that are identified within the policy are immediately adjacent to a designated nature conservation site; however, they do direct development within reasonably close proximity of the River Wye SAC, which may come under increased pressure from recreation activities from the growing local population, or from noise and vibration from any increase in vehicle traffic that may still occur despite the measures in place to encourage sustainable transport use. As such, negative effects on a designated European site may occur (SA objectives 13.1 and 13.2) and this is being considered in more detail through the Habitats Regulations Assessment for the Core Strategy. However, the provision of green space should have positive effects on biodiversity (SA objective 13.2) and increase habitat connectivity (SA objective 13.3).

According to the Hereford Urban Fringe Analysis⁸, the Holmer west site is in an area of medium-high landscape sensitivity, meaning that development here may have a negative effect on the quality of the landscape (SA objective 15). The Herefordshire Landscape Character Assessment⁹ identifies the area in which the Holmer east and west sites lie as being of the 'Principle Settled Farmlands' type, which comprises rolling lowland topography with scattered low-density settlements. It states that development within this landscape character type should be of low density in order to be in keeping with the landscape character. Despite this, the policy itself does not make any mention of the landscape, although the supporting text recognises the requirement to mitigate any potential adverse effects on sensitive landscapes, built settings and vistas. This wording should be brought into the policy itself, as a requirement for the development.

The requirement for SUDS to be incorporated into the green infrastructure planned for the development will help to reduce vulnerability to flooding, which is likely to increase as a result of climate change (SA objectives 17.1 and 17.3), and the provision of the green infrastructure will help to retain a certain proportion of land as permeable, in order to maintain and increase rates of infiltration. However, the south and east of the Holmer west site is at particular risk from flooding, thus it is not certain if SUDS will be sufficient to reduce flooding in those areas. SUDS should also be required in the new employment development proposed at Holmer East.

The Herefordshire Landscape Character Assessment states that the 'Principle Settled Farmlands' landscape is often land with good quality soils. As such, development on this greenfield land may have an adverse effect on maintaining soil quality (SA objective 18) if the large-scale development proposed leads to the loss of good quality soils in this area. As discussed for Policy H3, the quality of the River Wye SAC and the designated species within it, may be significantly negatively affected by any increase in demand for waste water treatment (SA objective 18.2), as the two sewage treatment works that serve the city discharge into the river, and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from the new housing to be provided in Hereford.

Based on the above, an overall mixed (minor positive and significant negative) effect is considered likely in relation to the Natural Environment.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version
Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

Opportunities to design out crime in new development should be referred to within the policy, or within the general sustainable design policy.

No amendments have been made to the policy in relation to this recommendation. This will be covered by the forthcoming Design policy.

Transport and Access

As the A49 presents a physical barrier between the Holmer west and east residential and employment sites, reference should be made in the policy for walking and cycling routes to be created/improved to enable safe and convenient crossing of this busy road.

Reference to cycling and walking has been made within the policy text.

The Built Environment

The masterplans for the urban extension need to take into account proximity to and setting of listed buildings.

No amendments have been made to the policy in relation to this recommendation. This will be part of the masterplan.

Resource Consumption and Climate Change

The policy should require the new development to incorporate renewable energy installations where possible, in order to increase the benefits of the energy efficient design of the homes to be developed. Although the policy stipulates that the residential development will meet high standards of energy efficiency, it does not make mention of this issue in relation to the employment development proposed at Holmer east or the community facilities etc. to be developed alongside the housing at Holmer west. The policy wording should be amended to ensure that this is a requirement of all development, not just housing, unless this will be covered in the general sustainable design policy that is still to be drafted. The sustainable design policy should also require adequate waste storage to encourage recycling, waste minimisation, re-use of materials, water efficiency etc and sustainable drainage systems in all new development.

Text has been added to the policy stating that employment development will be sustainable and well-designed, and an additional bullet point has been added stating that renewable energy should be incorporated into development where appropriate.

The Natural Environment

Specific reference should be made within the policy itself to the need to conserve and enhance the quality of the landscape and to mitigate any potential adverse effects arising from the development proposed, particularly in relation to the large-scale development proposed at Holmer west.

The policy should incorporate some mention of the need to mitigate any potential adverse effects on local biodiversity interests that may arise as a result of the development proposed, particularly in relation to the River Wye SAC. More specific recommendations will come from the Habitats Regulations Assessment work being undertaken for the Core Strategy. In order to avoid significant effects on water quality in the River Wye, Herefordshire Council needs to ensure that sufficient sewage treatment infrastructure/capacity is provided prior to development of the additional 4,500 homes in the new urban extensions.

Text has been added to the policy stating that new developments will be sensitively integrated into the existing landscape. Any potential impacts on the local environment or biodiversity should be mitigated and measures taken to conserve and enhance areas of important environmental and landscape quality.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H4: Northern Urban Expansion, as included in the consultation document.	++?	+	+?	++/-	++/-	+/-

Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect. The minor positive effect associated with resource consumption and climate change objectives has been amended to a potentially significant positive effect.

Table 8: Appraisal findings for policy H5

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H5: Western Urban Expansion (first draft version)	++?	+	+/-?	++/-	+/-	+/-
<p><u>Education and Employment</u></p> <p>The provision of 10ha of employment land should have a significant positive impact on employment provision (SA objective 1) and the fact that this is located relatively close to the housing development planned should enhance the accessibility of the site to potential employees, particularly via sustainable modes of transport such as walking and cycling (SA objective 1.2). It is not clear what type of activities would be located at the site, e.g. what type of commercial or industrial enterprises might offer employment opportunities, therefore it is not clear whether there would be opportunities to diversify from the existing available job opportunities available in and around Hereford (SA objective 1.4).</p> <p>The provision of employment opportunities may increase the available opportunities for work-based training and skills development (SA objective 2.1), although this will be largely dependent on the type of activities taking place at the site and is therefore uncertain at present.</p> <p>It is not clear from the policy whether the employment site will be developed to high environmental standards; this issue is only referred to in relation to the housing development. As such, the likely effect of the policy on the maintenance of a sustainable economy (SA objective 3) is unclear. The policy should specify that all development to take place within the western urban expansion is to be completed to high environmental standards, e.g. using energy efficient design, rather than just the residential development.</p> <p>The neighbourhood community hub that is to be provided within is to include retail facilities; therefore a positive effect in terms of the range of independent, competitive and national retailers (SA objective 7.2) is likely, depending on the type and number of shops that are developed.</p> <p>The provision of a new 420 place primary school within the Whitecross area and the expansion of Whitecross High School should help to meet the increasing demand for school places that is expected to result from the development of a total of 2,500 new homes at Three Elms and Whitecross as well as the 1,000 new homes to be provided at Holmer west (SA objective 8.1).</p> <p>Based on the above, an overall significant positive effect is likely in relation to the theme of Education and Employment, although there are currently some uncertainties associated with the effects.</p> <p><u>Healthy and Prosperous Communities</u></p> <p>The provision of a health centre and children’s outreach centre within the urban extension should help to ensure that residents of the new housing developed at Whitecross and Three Elms have access to health services nearby, as well as the residents of the existing residential areas of Kings Acre and Whitecross (SA objective 5.1), which they should be able to access via walking or cycling due to the provision of greenways which would also help to increase overall levels of activity amongst local people (SA objective 5.3). Incorporating sports and play facilities and open spaces within the new development will also help to ensure that facilities are available for local people to participate in healthy activities in the local area.</p> <p>The new development should have a positive effect on the overall quality of the public realm (SA objective 7.4), as buildings developed should be of a high quality and the provision of open spaces will help to ensure that the development comprises a visually attractive environment.</p> <p>The policy is not expected to have a direct effect on preventing crime and antisocial behaviour (SA objective 9), although opportunities exist to ‘design out’ crime within new development. The provision of new and expanded community facilities within new development should have a positive impact on social</p>						

inclusion and reducing exclusion, and the increased linkages planned (e.g. walking and cycling routes) should enhance levels of access to these facilities (SA objective 10.1) particularly for more deprived households who may not have access to a car.

Based on the above, an overall positive effect is likely in relation to the theme of Healthy and Prosperous Communities.

Transport and Access

The measures included within the policy to encourage sustainable transport use should have a positive impact on the reduction of traffic and congestion by increasing the proportion of journeys made by sustainable transport (SA objective 4). The provision of a park and ride facility will be key in influencing the levels of car use to and from the development site and the car share scheme referred to in the supporting text should further reduce road traffic, although this is unlikely to be developed until after the housing has been built, meaning that traffic levels on the A438/A4103 are unlikely to decrease in the short term. A reduction in traffic congestion should help to improve road safety and reduce the number and risk of accidents (SA objective 4.6). However, the employment land provided within the new livestock market development is to be accessed via the planned western relief road, which indicates that car use may remain high in terms of employee transport.

The provision of new community facilities within the urban extension will increase the type and quality of facilities available and will increase levels of access to such services for local people (SA objective 6.1). The proximity of the services to the residential development proposed should ensure that they are accessible via walking or cycling.

Although the policy states that energy efficiency standards will be met in the residential development, it does not mention whether such standards are to be incorporated into the supporting development such as shops and community facilities; therefore the likely effect on sustainable regeneration (SA objective 7.1) is uncertain. The policy should specify that such measures will be implemented in all development proposed, not just the housing development.

Based on the above, an overall mixed (minor positive and negative) effect is likely in relation to the theme of Transport and Access, although some uncertainties are associated with some of the objectives.

The Built Environment

The provision of a total of 2,500 new homes in the two urban extensions should have a significant positive effect on housing provision (SA objective 11.1), and the fact that 35% are to be affordable will have additional positive impacts by increasing the proportion of people to whom they will be available (SA objective 11.2). The high energy efficiency standards to be met by the development should help to reduce energy costs and fuel poverty (SA objective 11.4) and will have a positive effect in terms of the use of sustainable design techniques (SA objective 11.5).

The location of the housing sites means that access to the city centre to the east should be relatively convenient, particularly as greenways are to be provided to link the site with the main urban area, thereby having a positive effect in terms of the appropriate location of development (SA objective 19.1). However, the fact that all of the development (housing, employment, park and ride facility) is proposed on greenfield land will have an adverse effect on reusing previously developed land and on the potential to reuse existing buildings (SA objective 19.1). The proposal states that the housing to be developed will meet high standards of energy efficiency; therefore will have a positive effect on the use of sustainable and resource efficient design (SA objective 19.2), although other aspects are not covered such as waste minimisation, re-use of materials, water efficiency etc. and this is also not a requirement for the employment land development. The fact that the area is to be developed as 'neighbourhoods' which suitably reflect the historic character of the surrounding area should have a positive effect on integrating the land use (SA objective 19).

There are a number of listed buildings in close proximity to the site, the setting of which may be adversely affected by development (SA objective 20.1) depending on its design and precise location in relation to such features, and these would need to be considered within the detailed master planning for the urban extensions. The development does seek to incorporate open spaces and green infrastructure which should help to increase the overall quality of the local environment and have some positive effects on biodiversity and sense of place (SA objective 20.4).

Based on the above, a mixed (significant positive and minor negative) effect is likely to result from this policy in relation to the Built Environment theme.

Resource Consumption and Climate Change

The policy does not make any specific mention of the issue of waste production or disposal. Development on the scale proposed within the policy will inevitably result in an increase in waste production (SA objective 12.2); however it is not clear whether measures such as recycling facilities or storage space for recyclable materials are to be included in the development and therefore whether a positive effect on the promotion of re-using, recovering and recycling may be achieved (SA objective 12.3). This is also not covered by the other general policies on waste within the Core Strategy.

It is inevitable that development on the scale proposed here will result in an overall increase in energy consumption. However, the policy states that the 2,500 new homes to be provided will be built to energy efficiency standards (SA objective 14.1), but does not refer to any similar requirements in relation to the employment land or for the community facilities to be developed to support the housing. There is also no mention of incorporating renewable energy installations within the development.

The provision of green infrastructure within the development will help to retain a certain proportion of land as permeable, in order to maintain and increase rates of infiltration and therefore reduce the risk of flooding (SA objective 16). However, some parts of the Three Elms site are constrained by flooding, although this is expected to be alleviated by the Yazor Brook Flood Alleviation Scheme.

The promotion of sustainable transport use should help to reduce greenhouse gas emissions from transport (SA objective 16.1) and air pollution (SA objective 18). However, the actual potential for decreases in road traffic likely to result from the sustainable transport measures proposed in the policy and in Policy H2 is uncertain.

Based on the above, an overall mixed (minor positive and negative) effect is likely in relation to the theme of Resource Consumption and Climate Change.

The Natural Environment

The policy makes little mention of the need to conserve and enhance natural environmental assets in and around the western urban expansion area, although it does state that the setting of the Huntingdon Conservation Area, Yazor Brook and Huntingdon Lane in particular should be retained. Neither of the development sites that are identified within the policy are immediately adjacent to a designated nature conservation site; however they do direct development within reasonably close proximity of the River Wye SAC which may come under increased pressure from recreation activities from the growing local population, or from noise and vibration from any increase in vehicle traffic that may still occur despite the measures in place to encourage sustainable transport use. As such, negative effects on a designated European site may occur (SA objectives 13.1 and 13.2) and this is being considered in more detail through the Habitats Regulations Assessment for the Core Strategy. However, the provision of green space should have positive effects on biodiversity (SA objective 13.2) and increase habitat connectivity (SA objective 13.3).

According to the Hereford Urban Fringe Analysis, the Whitecross site is in an area of medium-high landscape sensitivity, meaning that development here may have a significant negative effect on the quality of the landscape (SA objective 15). The Herefordshire Landscape Character Assessment (LCA) identifies the area in which the Whitecross site lies as being of the 'Principle Timbered Farmlands' type, where prominent tree cover (linear trees, woodland and hedgerows) characterises the landscape. It states that modern development comprising groups of new houses would not be appropriate in this landscape. Three Elms site lies within the 'Principle Settled Farmlands' type, which comprises rolling lowland topography with scattered low-density settlements. The LCA states that development within this landscape character type should be of low density in order to be in keeping with the landscape character. Despite this, the policy itself does not make any mention of the landscape, although the supporting text makes a brief reference to the need to incorporate the development into the surrounding landscape and the need to protect the setting of the Huntingdon Conservation Area (SA objective 20.1). This wording should be brought into the policy itself, as a requirement for the development.

The provision of green infrastructure within the development will help to reduce vulnerability to flooding

by retaining a certain proportion of land as permeable, in order to maintain and increase rates of infiltration (SA objectives 17.1 and 17.3). However, the Three Elms area is currently constrained by flooding, which should be alleviated by the future Yazor Brook Flood Alleviation Scheme if this is delivered in advance or at the same time as the new housing.

The Herefordshire Landscape Character Assessment states that the 'Principle Settled Farmlands' landscape is often land with good quality soils. As such, development on this greenfield land may have an adverse effect on maintaining soil quality (SA objective 18) if the large-scale development proposed at the Three Elms site leads to the loss of good quality soils in this area. As discussed for Policy H3, the quality of the River Wye SAC and the designated species within it, may be significantly negatively affected by any increase in demand for waste water treatment (SA objective 18.2), as the two sewage treatment works that serve the city discharge into the river, and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from the new housing to be provided in Hereford.

Based on the above, an overall mixed (minor positive and significant negative) effect is considered likely in relation to the Natural Environment.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version
Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

Opportunities to design out crime in new development should be referred to within the policy, or within the general sustainable design policy.

No amendments have been made to the policy wording in relation to this recommendation. This will be part of the forthcoming Design policy.

Transport and Access

Every effort should be made in the infrastructure delivery plan for the Core Strategy to align the timing of the park and ride facility with the new residential developments.

No amendments have been made to the policy wording in relation to this recommendation. This will be part of the Infrastructure Delivery Plan and the master plan stage.

The Built Environment

The master plans for the urban extension need to take into account proximity to and setting of listed buildings.

No amendments have been made to the policy wording in relation to this recommendation. This will be taken into account at the masterplan stage.

Resource Consumption and Climate Change

The policy should require the new development to incorporate renewable energy installations where possible, in order to increase the benefits of the energy efficient design of the homes to be developed. Although the policy stipulates that the residential development will meet high standards of energy efficiency, it does not make mention of this issue in relation to the employment development proposed. The policy wording should be amended to ensure that this is a requirement of all development, not just housing, unless this will be covered in the general sustainable design policy that is still to be drafted. The sustainable design policy should also require adequate waste storage to encourage recycling, waste minimisation, re-use of materials, water efficiency etc and sustainable drainage systems in all new development.

A bullet point has been added to the policy making reference to the possible inclusion of renewable energy installations within the development. An amendment has been made to bullet point 3 to include reference to the need for employment development to meet high standards of design and sustainable construction

The Natural Environment

Specific reference should be made within the policy itself to the need to conserve and enhance the quality of the landscape and to mitigate any potential adverse effects arising from the development proposed.

An additional paragraph has been added to the policy regarding the need to conserve and enhance the quality of the landscape and local biodiversity.

The policy should incorporate some mention of the need to mitigate any potential adverse effects on local biodiversity interests that may arise as a result of the development proposed, particularly in relation to the River Wye SAC. More specific recommendations will come from the Habitats Regulations Assessment work being undertaken for the Core Strategy. In order to avoid significant effects on water quality in the River Wye, Herefordshire Council needs to ensure that sufficient sewage treatment infrastructure/capacity is provided prior to development of the additional 4,500 homes in the new urban extensions.

Requiring SUDS to be incorporated in all new development proposed in the policy would also help to reduce the area’s vulnerability to flooding. Every effort should be made in the infrastructure delivery plan for the Core Strategy to align the timing of delivery of the Yazor Brook Flood Alleviation Scheme with the new residential developments.

A bullet point has been added to the policy requiring sustainable drainage solutions, as part of the green infrastructure.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H5: Western Urban Expansion, as included in the consultation document.	++?	+	+/-?	++/-	+/-	+/-

Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect.

Table 9: Appraisal findings for policy H6

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
H6: Southern Urban Expansion (first draft version)	+?	+	+/-	++/-	+/-	+/-
<p>Education and Employment</p> <p>The provision of 'small-scale sustainable employment opportunities' should have a positive impact on employment provision (SA objective 1); although it is not completely clear what is meant by the term 'sustainable employment' i.e. whether this relates to the type of jobs to be created or to the nature of the employment land. The fact that the proposed housing is to be located within reasonably close proximity to the existing employment sites at Rotherwas should enhance the accessibility of the site for potential employees who live there by modes other than car use (SA objective 1.2). The park and ride facility proposed in the policy and car share schemes referred to in the supporting text should also enable people commuting into and out of the city centre to make use of more sustainable modes of transport.</p> <p>The new jobs provided may result in some increased opportunities for work-based learning and skills development (SA objective 2); however this will be dependent on the nature of the jobs provided, which is not yet known. The fact that the number of jobs to be provided as a result of the policy is small means that any such opportunities are likely to be limited.</p> <p>As stated above, the policy does not clearly specify what is meant by sustainable employment opportunities; therefore the likely effect of the policy on the maintenance of a sustainable economy (SA objective 3) is uncertain.</p> <p>The neighbourhood community hub that is to be provided within is to include retail facilities; therefore a positive effect in terms of the range of independent, competitive and national retailers (SA objective 7.2) is likely, depending on the type and number of shops that are developed.</p> <p>The possible provision of a new 210 place primary school may have a positive effect in terms of meeting the increasing demand for school places that is expected to result from the housing development proposed (SA objective 8); however it is unclear at this stage whether a new school will be provided. If it is decided that existing schools within the south Wye area will accommodate the additional demand arising from the housing development, positive effects should still result although it is less likely that sustainable transport modes will be used to access those schools as even if additional infrastructure is provided, the longer distances mean that car travel is likely to remain high.</p> <p>Based on the above, an overall positive effect on Education and Employment is likely; although some uncertainties remain in relation to some of the objectives.</p> <p>Healthy and Prosperous Communities</p> <p>The provision of a health centre and children's outreach centre within the urban extension should help to ensure that residents of the new housing developed have access to health services nearby (SA objective 5.1), which they should be able to access via walking or cycling due to the provision of greenways which would also help to increase overall levels of activity amongst local people (SA objective 5.3). Incorporating sports and play facilities and open spaces within the new development will also help to ensure that facilities are available for local people to participate in healthy activities in the local area.</p> <p>The new development should have a positive effect on the overall quality of the public realm (SA objective 7.4), as buildings developed should be of a high quality and the provision of open spaces will help to ensure that the development comprises a visually attractive environment.</p> <p>The policy is not expected to have a direct effect on preventing crime and antisocial behaviour (SA</p>						

objective 9), although opportunities to 'design out' crime could be included within the new developments. The provision of new and expanded community facilities within new development should have a positive impact on social inclusion and reducing exclusion, and the increased linkages planned (e.g. walking and cycling routes) should enhance levels of access to these facilities (SA objective 10.1) particularly for more deprived households who may not have access to a car.

Based on the above, an overall positive effect is likely in relation to the theme of Healthy and Prosperous Communities.

Transport and Access

The measures included within the policy to encourage sustainable transport use, in particular walking and cycling, should have a significant positive impact on the reduction of traffic and congestion by increasing the proportion of journeys made by sustainable transport (SA objective 4). The proximity of the site to the railway line may indicate that there may be some potential for expanding this mode of transport, e.g. for transportation of freight to and from the new and existing employment sites, although this will depend on the appropriate infrastructure being provided. The provision of a Park and Ride facility should also have a positive impact by reducing the volume of traffic movement into and out of the city centre along the B4399 and the heavily congested A49, particularly at peak rush hour times, although this effect is unlikely to occur in the short term. A reduction in traffic congestion should help to improve road safety and reduce the number and risk of accidents (SA objective 4.6).

The provision of new community facilities within the urban extension will increase the type and quality of facilities available and will increase levels of access to such services for local people (SA objective 6.1). The proximity of the services to the residential development proposed should ensure that they are accessible via walking or cycling.

Although the policy states that energy efficiency standards will be met in the residential development, it does not mention whether such standards are to be incorporated into the supporting development such as shops and community facilities; therefore the likely effect on sustainable regeneration (SA objective 7.1) is uncertain. The policy should specify that such measures will be implemented in all development proposed, not just the housing development.

Based on the above, an overall mixed (minor positive and negative) effect is likely in relation to the theme of Transport and Access, although some uncertainties are associated with some of the objectives.

The Built Environment

The provision of a 1,000 new homes should have a significant positive effect on housing provision (SA objective 11.1), and the fact that 35% are to be affordable will have additional positive impacts by increasing the proportion of people to whom they will be available (SA objective 11.2). The high energy efficiency standards to be met by the development should help to reduce energy costs and fuel poverty (SA objective 11.4) and will have a positive effect in terms of the use of sustainable design techniques (SA objective 11.5).

The location of the housing means that access to the city centre to the north should be relatively convenient, particularly as greenways are to be provided to link the site with the main urban area, thereby having a positive effect in terms of the appropriate location of development (SA objective 19.1). However, the river comprises a physical barrier between the development and the city centre, and links between the two areas will need to cross this. The fact that the development is proposed on greenfield land will have an adverse effect on reusing previously developed land and on the potential to reuse existing buildings (SA objective 19.1). The proposal states that the housing to be developed will meet high standards of energy efficiency; therefore will have a positive effect on the use of sustainable and resource efficient design (SA objective 19.2), although other aspects are not covered such as waste minimisation, re-use of materials, water efficiency etc. and this is also not a requirement for the employment land development.

The character of the development proposed – 'villages' or 'neighbourhoods' with an appropriate character and design – should help to enhance the character and quality of the built environment (SA objective 20). However, there are a number of listed buildings in close proximity to the site, the setting of which may be adversely affected by development (SA objective 20.1) depending on its design and precise location in relation to such features, and these should be considered in the master planning of the urban

extension site. The development does seek to incorporate open spaces and green infrastructure which should help to increase the overall quality of the local environment and have some positive effects on biodiversity and sense of place (SA objective 20.4).

Based on the above, a mixed (significant positive and minor negative) effect is likely to result from this policy in relation to the Built Environment theme.

Resource Consumption and Climate Change

The policy does not make any specific mention of the issue of waste production or disposal. Development on the scale proposed within the policy will inevitably result in an increase in waste production (SA objective 12.2); however it is not clear whether measures such as recycling facilities or storage space for recyclable materials are to be included in the development and therefore whether a positive effect on the promotion of re-using, recovering and recycling may be achieved (SA objective 12.3). This is also not covered by the other general policies on waste within the Core Strategy.

It is inevitable that development on the scale proposed here will result in an overall increase in energy consumption. However, the policy states that the 1,000 new homes to be provided will be built to energy efficiency standards (SA objective 14.1), but does not refer to any similar requirements in relation to the employment land or for the community facilities to be developed to support the housing. There is also no mention of incorporating renewable energy installations within the development.

The provision of green infrastructure (including SUDS) will help to retain a certain proportion of land as permeable, in order to maintain and increase rates of infiltration (SA objective 16), which is of particular importance as the area is constrained by flooding.

The promotion of sustainable transport use should help to reduce greenhouse gas emissions from transport (SA objective 16.1) and air pollution (SA objective 18). However, the actual potential for decreases in road traffic likely to result from the sustainable transport measures proposed in the policy and in Policy H2 is uncertain.

Based on the above, an overall mixed (minor positive and negative) effect is likely in relation to the theme of Resource Consumption and Climate Change.

The Natural Environment

The policy makes little mention of the need to conserve and enhance natural environmental assets in and around the southern urban expansion area. The development site is not immediately adjacent to a designated nature conservation site; however it does direct development within reasonably close proximity of the River Wye SAC which may come under increased pressure from recreation activities from the growing local population, or from noise and vibration from any increase in vehicle traffic that may still occur despite the measures in place to encourage sustainable transport use. As such, negative effects on a designated European site may occur (SA objectives 13.1 and 13.2) and this is being considered in more detail through the Habitats Regulations Assessment for the Core Strategy. However, the provision of green space should have positive effects on biodiversity (SA objective 13.2) and increase habitat connectivity (SA objective 13.3).

According to the Hereford Urban Fringe Analysis, the Lower Bullingham site is in an area of medium-high landscape sensitivity, meaning that development here may have a significant negative effect on the quality of the landscape (SA objective 15). The Herefordshire Landscape Character Assessment identifies the area in which the site lies as being of the 'Principle Settled Farmlands' type, which comprises rolling lowland topography with scattered low-density settlements. It states that development within this landscape character type should be of low density in order to be in keeping with the landscape character. Despite this, the policy itself does not make any mention of the landscape, although the supporting text makes a brief reference to the possible need to mitigate effects on the sensitive landscape to the south of the access road at Dinedor Hill through the careful design of new development (SA objective 20.1). This wording should be brought into the policy itself, as a requirement for the development.

The requirement to incorporate greenspace and SUDS into the development should have a positive impact on reducing the risk of flooding (SA objectives 17.1 and 17.3).

The Herefordshire Landscape Character Assessment states that the 'Principle Settled Farmlands'

landscape is often land with good quality soils. As such, development on this greenfield land may have an adverse effect on maintaining soil quality (SA objective 18.1 and 18.3) if the large-scale development proposed at the Bullingham site leads to the loss of good quality soils in this area. As discussed for Policy H3, the quality of the River Wye SAC and the designated species within it, may be significantly negatively affected by any increase in demand for waste water treatment (SA objective 18.2), as the two sewage treatment works that serve the city discharge into the river, and have been identified by the Environment Agency as needing their discharge consents to be reduced, which means they are likely to have insufficient capacity to adequately treat the increased sewage arising from the new housing to be provided in Hereford.

Based on the above, an overall mixed (minor positive and significant negative) effect is considered likely in relation to the Natural Environment.

Recommendations made for the first draft provided by Herefordshire Council early September 2010

Text in italics notes how Herefordshire Council addressed the SA recommendations in the final consultation version
Education and Employment

No specific recommendations are made in relation to this theme.

Healthy and Prosperous Communities

Opportunities to design out crime in new development should be referred to within the policy, or within the general sustainable design policy.

Transport and Access

Every effort should be made in the infrastructure delivery plan for the Core Strategy to align the timing of the park and ride facility with the new residential developments.

The Built Environment

The master plans for the urban extension need to take into account proximity to and setting of listed buildings.

Resource Consumption and Climate Change

Although the policy stipulates that the residential development will meet high standards of energy efficiency, it does not make mention of this issue in relation to the employment development proposed. The policy wording should be amended to ensure that this is a requirement of all development, not just housing, unless this will be covered in the general sustainable design policy that is still to be drafted. The sustainable design policy should also require adequate waste storage to encourage recycling, waste minimisation, re-use of materials, water efficiency etc and sustainable drainage systems in all new development.

A bullet point has been added to the policy stating that the new neighbourhoods will incorporate renewable energy where appropriate.

The Natural Environment

Specific reference should be made within the policy itself to the need to conserve and enhance the quality of the landscape and to mitigate any potential adverse effects arising from the development proposed.

The policy should incorporate some mention of the need to mitigate any potential adverse effects on local biodiversity interests that may arise as a result of the development proposed, particularly in relation to the River Wye SAC. More specific recommendations will come from the Habitats Regulations Assessment work being undertaken for the Core Strategy. In order to avoid significant effects on water quality in the River Wye, Herefordshire Council needs to ensure that sufficient sewage treatment infrastructure/capacity is provided prior to development of the additional 4,500 homes in the new urban extensions.

Text has been added to the policy stating that new developments will be sensitively integrated into the existing landscape and that any potential impacts on the local environment and biodiversity should be mitigated and measures taken to conserve and enhance areas of important environmental and landscape quality.

Core Strategy Policy	SA Objective Topics					
	Education & Employment	Healthy & Prosperous Communities	Transport & Access	Built Environment	Resource Consumption & Climate Change	Natural Environment
SA Objectives covered by Topic	1, 2, 3, 7, 8	5, 7, 9, 10	4, 6, 7	11, 19, 20	12, 14, 16, 18	13, 15, 17, 18
Scores for the revised policy H6: Southern Urban Expansion, as included in the consultation document.	+	+	+/-	++/-	+/-	+/-
<i>Based on the amendments made to the policy wording, the potential significant negative effect associated with the natural environment objectives has been changed to a minor negative effect.</i>						

Appendix 1: SA Framework grouped by theme

The SA objectives and sub-objectives have been presented below under the relevant theme heading. Note that sub-objectives may be organised under different themes, according to the issues that they address (e.g. sub-objectives in SA Objectives 7, 18).

Education and Employment

SA Objectives	
1	<p>Support, maintain or enhance the provision of high quality, local or easily accessible employment opportunities, suited to the changing needs of the local workforce.</p> <p>1.1 Maintain or increase current employment rates in knowledge and technology intensive sectors.</p> <p>1.2 Provide flexible employment land near to the workforce or provide opportunities easily accessible by public transport.</p> <p>1.3 Encourage fair and decent work conditions and increase median weekly earnings.</p> <p>1.4 Help to increase diversity of job opportunities.</p>
2	<p>Secure a more adaptable and higher skilled workforce.</p> <p>2.1 Provide or facilitate through investment, appropriate training and learning to help build, attract and retain a highly skilled workforce that meets existing and future needs.</p> <p>2.2 Reduce inequalities in skills across the county.</p> <p>2.3 Promote the voluntary sector, lifelong learning and life/environmental skills.</p>
3	<p>Maintain or enhance conditions that enable a sustainable economy and continued investment.</p> <p>3.1 Improve the resilience and/or diversity of business and the economy.</p> <p>3.2 Provide or facilitate availability of appropriate sites and properties for new business opportunities or growth whilst using natural resources efficiently.</p> <p>3.3 Encourage and support a culture of enterprise and innovation, including social enterprise or the voluntary sector.</p> <p>3.4 Encourage corporate social and environmental responsibility, with county organisations leading by example.</p> <p>3.5 Promote and support the development of new high value and low impact technologies, especially resource-efficient technologies and environmental technology initiatives.</p>
7	<p>Sustainable regeneration</p> <p>7.2 Help create an appropriate range of independent, competitive and national retailers.</p> <p>7.3 Help reduce the number of vacant properties and support vitality.</p>
8	<p>Raise educational achievement levels across the County.</p> <p>8.1 Ensure that education infrastructure meets projected future demand and need.</p>

Healthy and Prosperous Communities

SA Objectives	
5	<p>Improve the health of the people of Herefordshire, reduce disparities in health geographically and demographically and encourage healthy living for all.</p> <p>5.1 Help to ensure there is adequate provision of healthcare services appropriate to local needs, which are accessible by sustainable modes of transport.</p> <p>5.2 Help to reduce inequalities in health.</p> <p>5.3 Encourage healthy lifestyles, e.g. reducing car use and maintaining or enhancing access to physical sports, green space and recreation.</p>
7	<p>Sustainable regeneration.</p> <p>7.4 Support or create high quality public realm and community/amenity space that is safe and encourages positive community interaction.</p>
9	<p>Reduce and prevent crime/fear of crime and antisocial behaviour in the county.</p> <p>9.1 Enhance community safety, security and reduce crime or fear of crime and anti-social behaviour.</p> <p>9.2 Help improve quality of life and address the opportunity for crime or anti-social behaviour through design measures.</p> <p>9.3 Encourage respect for people and the environment.</p>
10	<p>Reduce poverty and promote equality, social inclusion by closing the gap between the most deprived areas in the county and the rest of the county.</p> <p>10.1 Ensure easy and equitable access to and provision of services and opportunities, including jobs and learning, and avoid negative impacts on different groups of people because of their ethnicity, gender, religion, disability, sexuality or age.</p> <p>10.2 Enable the involvement of all affected parties, including hard to reach groups.</p> <p>10.3 Promote equality, fairness and respect for people and the environment.</p> <p>10.4 Address poverty and disadvantage, taking into account the particular difficulties of those facing multiple disadvantages.</p>

Transport and Access

SA Objectives	
4	<p>Reduce road traffic and congestion, pollution and accidents and improve health through physical activity by increasing the proportion of journeys made by public transport, cycling and walking.</p> <p>4.1 Reduce the need to travel.</p> <p>4.2 Promote more sustainable transport patterns in areas suffering from congestion,</p> <p>4.3 Improve the quality and/or provision of integrated transport options in areas of need and that are accessible to all.</p> <p>4.4 Increase the use of public transport, cycling and walking.</p> <p>4.5 Secure the implementation of green travel plans.</p> <p>4.6 Minimise risks associated with car travel.</p> <p>4.7 Promote a shift of freight from road to rail.</p>
6	<p>Improve equality of access to and engagement in quality cultural, educational, leisure, sporting, recreational and community activities for all.</p> <p>6.1 Maintain or increase the type or quality of facilities (including open space) in areas where there is need, ensuring easy and equitable access by sustainable modes of transport.</p> <p>6.2 Promote Herefordshire's facilities to local people and tourists encouraging appreciation of the heritage of the county and participation by all.</p> <p>6.3 Promote the use of inland waterways for leisure, recreation, telecommunication, freight transport and/or as a catalyst for urban and rural regeneration.</p>
7	<p>Sustainable regeneration</p> <p>7.1 Support viability or develop services and facilities appropriate to the community, function, character and scale of the centre and existing facilities using sustainable, resource- efficient designs.</p>

The Built Environment

SA Objectives	
11	<p>Provide everyone with the opportunity to live in good quality, affordable housing of the right type and tenure, in clear, safe and pleasant local environments.</p> <p>11.1 Increase access to good quality housing meeting people's needs (e.g. tenure, aspirations, location, affordability, size and type, accessible to disabled people).</p> <p>11.2 Increase the supply of affordable housing.</p> <p>11.3 Reduce the percentage of unfit homes/empty homes.</p> <p>11.4 Improve the energy and resource efficiency of homes and reduce fuel poverty and ill-health.</p> <p>11.5 Increase the use of sustainable design techniques, improve the quality of housing and use sustainable building materials in construction.</p> <p>11.6 Improve the wider built environment and sense of place.</p>
19	<p>Ensure integrated, efficient and balanced land use.</p> <p>19.1 Ensure new developments are in appropriate locations, optimising the use of previously developed land and buildings, primarily focussed on the urban areas and are accessible by walking, cycling or sustainable transport and/or will increase the share of these transport modes, thereby reducing the need to travel.</p> <p>19.2 Encourage an appropriate density and mix of uses using sustainable resource-efficient design.</p> <p>19.3 Promote ways of meeting local needs locally by encouraging local sourcing of food, goods and materials.</p>
20	<p>Value, protect and enhance the character and built quality of settlements and neighbourhoods and the county's historic environment and cultural heritage.</p> <p>20.1 Preserve, protect and enhance Conservation Areas, Listed Buildings, archaeological remains, and other features and areas of historical heritage and cultural value e.g. locally listed buildings.</p> <p>20.2 Prevent development which is inappropriate in scale, form or design to its setting or to its function or local area.</p> <p>20.3 Encourage development that creates and sustains well-designed, high quality built environments that incorporate green space, encourage biodiversity and promote local distinctiveness and sense of place?</p> <p>20.4 Encourage cleanliness and/or improve the general appearance of the area.</p>

Resource Consumption and Climate Change

SA Objectives	
12	<p>Reduce the amount of waste requiring disposal and minimise the use of non-reusable materials and encourage recycling.</p> <p>12.1 Minimise the use of non re-usable materials.</p> <p>12.2 Minimise waste from households, businesses etc including hazardous waste.</p> <p>12.3 Promote re-use, recovery and recycling of waste.</p> <p>12.4 Deal with waste locally and/or through the best Practical Environmental Option.</p>
14	<p>Use natural resources and energy more efficiently.</p> <p>14.1 Maximise energy efficiency and minimise the consumption of non-renewable energy i.e. from fossil fuels.</p> <p>14.2 Minimise the consumption of water, land, soil, minerals, aggregates and other raw materials by all? E.g. through integrated transport, sustainable resource-efficient design, local sourcing of food, goods, materials.</p> <p>14.3 Encourage the re-use/enhancement (to high standards of sustainable resource-efficient design) of existing buildings and minimise the need for new build.</p>
16	<p>Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.</p> <p>16.1 Reduce the county's contribution to climate change by reducing greenhouse gas emissions from transport, domestic, commercial and industrial sources.</p> <p>16.2 Increase the proportion of energy generated from renewable and low carbon sources including by micro-generation, Combined Heat and Power (CHP), district heating and in transportation.</p>
18	<p>Minimise local and global pollution and protect or enhance environmental resources.</p> <p>18.5 Encourage the use of clean technologies and water minimisation techniques.</p>

The Natural Environment

SA Objectives	
13	<p>Value, maintain, restore and expand county biodiversity.</p> <p>13.1 Protect or enhance habitats of international, national, regional or local importance.</p> <p>13.2 Protect international, national, regional or locally important terrestrial or aquatic species.</p> <p>13.3 Maintain wildlife corridors and minimise fragmentation of ecological areas and green spaces.</p> <p>13.4 Manage access to sites in a sustainable way that protects or enhances their nature conservation value.</p> <p>13.5 Create new appropriate habitats.</p>
15	<p>Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces.</p> <p>15.1 Value, enhance and protect natural environmental assets including AONB's, historic landscapes, open spaces, parks and gardens and their settings.</p> <p>15.2 Encourage local stewardship of local environments, for example by promoting best practices in agricultural management.</p> <p>15.3 Ensure that environmental impacts caused by mineral operations and the transport of minerals are minimised.</p> <p>15.4 Promote the use of rural areas and open space by all, encourage easy non-car based access, and accommodate the needs of disabled users.</p>
17	<p>Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.</p> <p>17.1 Reduce flood risk both presently and taking into account climate change.</p> <p>17.2 Prevent inappropriate development of the floodplain, and include flood protection systems.</p> <p>17.3 Include sustainable urban drainage systems where appropriate.</p>
18	<p>Minimise local and global pollution and protect or enhance environmental resources.</p> <p>18.1 Minimise water, air, soil, groundwater, noise and light pollution from current activities and the potential for such pollution.</p> <p>18.2 Protect and enhance the quality of watercourses.</p> <p>18.3 Provide opportunities to improve soil quality or reduce contaminated land.</p> <p>18.4 Help achieve the objectives of Air Quality Management Plans through for e.g. increasing use of public transport, cycling and walking.</p>