

Solihull Local Plan Review

Interim Sustainability Appraisal Report

Solihull Metropolitan Borough Council

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Quality information

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1. Introduction

1.1 Background

This document is an interim Sustainability Appraisal (SA) Report that accompanies the Draft Local Plan (review) being prepared by Solihull Metropolitan Borough Council ('the Council').

Local Development Documents must undergo a Sustainability Appraisal incorporating a Strategic Environmental Assessment that considers the environmental, social and economic consequences of the plan (in light of reasonable alternatives)². This interim Sustainability Appraisal Report documents the SA findings in relation to the work that has been undertaken so far to develop a revised Local Plan (in light of the review process).

1.2 The Local Plan review

The current Local Plan, the "Solihull Local Plan" (SLP), was adopted in December 2013 and covers the period 2011 to 2028. Although it is a relatively recently adopted plan, and is up-to-date in many respects; there are three reasons that have triggered the need for an early review of it.

- Successful legal challenge following Adoption means that the Council has no housing targets and cannot demonstrate a 5 year supply of housing.
- Examination of the Birmingham Development Plan has made clear that Birmingham City Council is unable to meet its own housing need within its boundaries, and that the shortfall will have to be met elsewhere within the Housing Market Area (HMA), of which Solihull is a part, or other nearby areas.
- The arrival of HS2, and in particular the opportunities to unlock/maximise the benefits from the location of the Interchange station in the northern part of the Borough

2. Scoping Summary

2.1 Background

The scoping stage of SA establishes the baseline position and policy context for the SA. This helps to identify the key issues that should be the focus of the SA and the methodology that will be used to undertake the appraisal.

Following on from previous scoping exercises that have been undertaken in support of the Local Plan, the scope of the SA has been established under a series of sustainability topics. These topics reflect the factors outlined in Schedule 2 of the SEA Regulations (see table 2.1).

The four over-arching 'themes' established in the UK Sustainability Strategy have also been used to aid in the presentation of findings and the structure of reports; these are:

- Sustainable consumption and production;
- Climate change and energy;
- Natural resource protection; and environmental enhancement; and
- Sustainable communities

Table 2.1: Sustainability topics established for Scoping

Sustainability Topic	Factors covered	Links to Schedule 2 of Regs ¹
Population and communities	<i>Demographics, health, deprivation, crime, towns and villages</i>	<i>Population, human health</i>
Housing	<i>Housing</i>	<i>Material assets</i>
Economy	<i>The economy, employment and workforce, retail and town centre services</i>	<i>Population</i>
Transport and access	<i>Transport, access to services</i>	<i>n/a</i>
Air quality and noise	<i>Air quality, noise</i>	<i>Air</i>
Climate change	<i>Greenhouse gases, climate change adaptation, flooding</i>	<i>Climatic factors</i>
Biodiversity and Geodiversity	<i>Environmental designations, Biodiversity Action Plans.</i>	<i>Fauna, flora, biodiversity</i>
Landscape and land	<i>Landscape designations, landscape character, open space, agriculture and land use.</i>	<i>Landscape, soil</i>
Cultural heritage	<i>Designations, Conservation Areas, Heritage at Risk, historic landscape. archaeology, built environment</i>	<i>Cultural heritage</i>
Water	<i>Water availability, waste water</i>	<i>Water</i>
Waste and minerals	<i>Waste, minerals</i>	<i>Material assets</i>

2.2 Summary of key issues and the SA Framework

The most recent scoping report was prepared and consulted upon during October / November 2016. This report updated previous scoping exercises, and helped to re-confirm the key issues that have been identified in the scope of the SA. The key issues are summarised in table 2.2. which follows.

The Sustainability Appraisal framework provides a means to ascertain whether and how specific sustainability issues (established through scoping) are being addressed, and to understand the social, economic and environmental implications of options, policies and proposals.

The framework consists of a set of sustainability objectives and ancillary questions, grouped by UK Sustainable Development Strategy priorities. This framework is used to assist in the prediction and measurement of the effects of the Plan (and alternatives) and the monitoring of effects. The objectives and supporting questions are set out below, demonstrating how they link to key issues identified through scoping. The objectives incorporate the requirements of an equality impact assessment, which will be undertaken as part of the appraisal process, although a separate report on the assessment will be prepared.

An appropriate starting point for establishing the SA Framework was to use the framework set out in the Interim SA Report 2015. This has been updated as appropriate in light of updates to the scope and in light of comments received in response to consultation on the Scoping Report in October / November 2016 (See Appendix I).

The framework has broadly remained the same as that identified in previous scoping reports. The main changes are as follows:

- Two objectives were removed from the framework to reduce duplication in appraisal. Former Objective 21 'Public Safety', is broadly covered by the 'Crime' Objective. Objective 17 'Commercial Assets' is broadly covered by a number of the topics that deal with regeneration and economic growth.
- Changes to the wording of the SA Objectives and supporting questions in response to consultation feedback.

Table 2.2: The SA Framework and corresponding key issues

Sustainable consumption and production		
SA objective	Supporting details	Key issues
1. To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived.	<ul style="list-style-type: none"> a) Provide a quality of life able to help retain well-educated members of the work force b) To enable the provision of offices and premises able to meet the needs of business start-ups as well as larger businesses attracted by the transport-hub and knowledge-hub that exists. c) Ensure that communities (especially those of 'need') benefit from opportunities brought by HS2 and UK Central 	<p>Performance indicators in the regeneration zone for North Solihull are lower the rest of the Borough.</p> <p>There is a relatively high level of small business start-ups.</p> <p>Continued growth and investment is expected to be experienced within Solihull over the Plan period</p>
2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.		There is a need to support people with low levels of skills into employment.
3. To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.		Despite some good public transport links, levels of car usage are higher than the national average.
4. Minimise the use of natural resources such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling.	<ul style="list-style-type: none"> a) Deliver reductions in the quantity of water used in the borough. b) Reduce waste generation and manage waste as far up the waste hierarchy as possible. c) Use previously developed sites where appropriate and ensure no net loss of ecological value. 	<p>There is a need to reduce waste and increase reuse and recycling. However, the borough has relatively high rates of household waste.</p> <p>Abstraction of water is controlled; coupled with the need to reduce carbon emissions; there is a need to improve water efficiency.</p>

Climate change and energy		
SA objective	Supporting details	Key Issues
5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation	<p>a) Deliver reductions in greenhouse gas emissions to contribute to the achievement of national and local targets.</p> <p>b) Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.</p>	Tackling climate change is a national and local priority. There is potential to increase the use of certain renewable and low carbon energy technologies.
6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.		Businesses are at risk from the effects of climate change and energy security.
7. Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses.		There is potential for flooding from various sources including watercourses, surface water and groundwater.
8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.		Climate change is predicted to lead to hotter summers and more extreme weather such as high winds.

Natural resource protection and environmental enhancement		
SA objective	Supporting detail	Key Issues
9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.		It is possible that local wildlife species and habitats could be affected by development and opportunities for enhancement not realised.
10. To manage the landscape effects of development in recognition of the European Landscape Convention as well as the risks and opportunities associated with measures to address climate change.		The distinctiveness of the Arden landscape is being eroded, and traditional buildings and agricultural features like hedgerows are declining.
11. To facilitate the delivery and enhance the quality of areas providing green infrastructure.		There is a need to improve the quality and/or quantity of green and open space to better meet the recreational needs of the population.
12. To conserve and enhance the historic environment, heritage assets and their settings.		There is a need to protect and better reveal the significance of heritage assets. The character of historic farmland needs to be protected and restored.
13. To deliver improvements in townscape and enhance local distinctiveness.		Creating a high quality and distinct built environment is a key objective.
14. Minimise air, soil, water, light and noise pollution.	<ul style="list-style-type: none"> a) Continue to deliver reductions in particulate and nitrogen dioxide levels. b) Manage the drainage network to ensure no detriment to surface water quality. c) Reduce the intrusion of urban and highway lighting. d) Deliver reductions in road traffic noise focusing on those areas identified as First Priority Locations by Defra under the Environmental Noise Directive. e) To conserve the best and most versatile agricultural land. f) Avoid exposure to noise associated with the airport and flights. 	<p>Local Plans have a key role to play in helping to ensure that air quality improves and exposure to pollution is minimised and reduced.</p> <p>Parts of the Borough are more exposed and vulnerable to sources of noise such as the Airport.</p> <p>There are areas of grade 2 agricultural land that should be protected from development.</p>

Sustainable Communities		
SA objective	Supporting detail	Key Issues
15. Reduce social exclusion and disparities within the Borough	<ul style="list-style-type: none"> a) Ensure that the pattern of development helps reduce imbalances across the borough. b) Promote employment opportunities and improve access to employment, education and health services c) Improve the public realm and community facilities. 	Although Solihull is a broadly affluent, the Borough is relatively polarised. There are pockets of deprivation with some LSOAs (to the north in particular) being within the most deprived 10% of the country.
16. Improve the supply and affordability of housing (particularly in the areas of greatest need)	<ul style="list-style-type: none"> a) Ensure a supply of housing appropriate to local needs, especially in relation to affordability. b) Make provision for the accommodation needs of Gypsies and Travellers. 	There is a need to meet identified housing needs for the full range of community groups.
17. To fully integrate the planning, transport, housing, cultural, recreational, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles.	<ul style="list-style-type: none"> a) Design the urban fabric and services to meet the needs of our communities throughout their lives. 	The population is predicted to live longer, which will result in a greater amount of elderly people living in the borough.
18. Reduce crime, fear of crime and anti-social behaviour.		Rates of crime are fairly low, but there are hotspots of crime to the north and in urban centres.
19. Encourage development with a better balance between jobs, housing and services, and provide easy and equitable access to opportunities, basic services and amenities for all.		The Local Plan should seek to tackle any inequalities in access to employment, affordable housing, recreation and public services.

2.3 Site appraisal framework

The site assessment framework below was established to appraise site options. The framework is based largely upon objective criteria and thresholds that allow for a consistent and fair comparison of site options. Mitigation measures have not been taken into account at this stage as this information is not available for each site option. Therefore, constraints identified at this stage do not necessarily mean that potential negative effects cannot be mitigated. The site appraisal process is intended to be one of several factors that are taken into account in the decision making process on which sites to allocate or not.

The scores will be determined through a series of criteria and set thresholds as follows:

Colour code	Symbol	Significance of effects
Dark green	✓✓	Significant positive effects more likely
Light green	✓	Positive effects likely
Grey	-	Neutral effects
Amber	✘	Negative effects likely / mitigation necessary
Red	✘✘	Significant negative effects likely / mitigation essential

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
<p>Deprivation and equality</p> <p>SA1: To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived.</p> <p>SA15. Reduce social exclusion and disparities within the Borough</p>	<p>Development located within top 10% most deprived ✓✓</p> <p>Located within top 20% most deprived ✓</p> <p>Located within top 40% most deprived -</p> <p>Located within 60% least deprived ✘</p>	<p>Development can have positive effects upon communities through the creation of accessible jobs, affordable housing and improved environments. Consequently, a positive effect would be expected where development is located nearby to communities recorded as having multiple indicators of deprivation.</p>
<p>2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.</p>	<p>Access to primary school</p> <p><400m <800m 800-1200m 1.2km - 3km >3km</p> <p>Access to secondary school</p> <p><1200m 1200m – 5km >5km</p>	<p>According to the CIHT (2000) 'Providing for Journeys by foot', <1200m is considered a reasonable walking distance. Therefore, distances below this are considered to be beneficial. Whilst residents beyond 1200m may be capable and willing to</p> <p>Development which is in closer proximity to services is considered to be more beneficial for a wider range of people as it is more likely that residents will be willing (and able) to walk to services.</p>
<p>3. To ensure that the location of development can be accommodated by existing and/or planned use of existing physical infrastructure and reduces the need to travel.</p>	<p>Proximity to bus and train services</p> <p>Within 400m of a frequent bus or train service (more than three bus services or 2 train services per hour)</p>	<p>According to the CIHT (2000) 'Providing for Journeys by foot', <1200m is considered a reasonable walking distance to public transport. Stops. Therefore, distances below this are considered to be beneficial.</p>

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
	<p>Within 400m of an infrequent bus or train service (less than 3 bus services or 2 train services per hour)</p> <p>Within 800m of a frequent bus or train service</p> <p>Within 800m, of an infrequent bus or train service</p> <p>Within 1400 m of an infrequent bus or train service</p> <p>More than 1400m of a bus stop or train station</p> <p>Proximity to principal road network for employment sites</p> <p>Less than 1km</p> <p>Less than 3km</p> <p>More than 3km</p>	
<p>4. Minimise the use of natural resources such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling.</p>	<p>Soil</p> <p>Does not contain any agricultural land Grade 1-3b</p> <p>Contains less than 10 ha of agricultural land 1-3b</p> <p>Contains more than 10 ha of agricultural land 1-2 or >20ha of 1-3b land.</p> <p>Contains more than 20ha of agricultural land 1-2 or >50ha 1-3b</p> <p>Minerals</p> <p>Site within minerals safeguard area</p> <p>Site outside of minerals safeguard area</p>	<p>Although there is little guidance, the loss of 20 hectares triggers consultation with DEFRA/Natural England, which can be considered significant.</p> <p>Development within areas safeguarded for mineral reserves could potentially lead to sterilisation of minerals (though further exploration would be necessary to confirm).</p>
<p>5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation</p>	<p>Development within proximity of heat demand / anchor loads</p> <p>Development not within proximity of heat demand / anchor loads</p>	<p>Development in close proximity to areas of heat demand and / or anchor loads could present opportunities to plug in to or help contribute towards the establishment of district heat networks. However, due to a lack of objective data, this criteria has not been included as part of the appraisal at this stage.</p>
<p>SA6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.</p>	<p>Design features will play a more important role than location in the achievement of this objective. Therefore, no criteria have been established.</p>	

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
SA8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.		
SA7. Manage, maintain and where necessary improve the drainage network to reduce the effects of flooding on communities and businesses.	<p>Flood risk</p> <p>Site is located entirely within Flood Zone 1 and / or Surface water flooding 1000 years</p> <p>Some of the site is in Flood Zones 2 or 3 (up to 50%) and / or Surface water flooding 100 years</p> <p>Most of the site is in Flood Zones 2 or 3 (more than 50%) and / or surface water flooding 30 years</p>	<p>Provided that a site is not wholly within a flood zone 2/3 it should be possible to avoid and/or mitigate impacts.</p> <p>However, proximity to zone 1 is preferable as it reduces the risk and potential cost of mitigation.</p> <p>Sites wholly within zones 2 and 3 should be sieved out.</p> <p>However, for those sites where it is considered mitigation could still be implemented a 'red' categorization is given.</p>
SA9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	<p>Overlaps or contains a local wildlife site and / or records of priority species and habitats. Site not of the scale to avoid sensitive habitats or to deliver strategic improvements to ecological networks and so development would likely lead to loss.</p> <p>Site does not contain local wildlife sites and .or records of LBAP priority habitats and species</p> <p>Overlaps or contains a local wildlife site and / or records of priority species and habitats. Site is of strategic scale to enhance ecological networks.</p>	<p>An element of qualitative analysis will need to be taken to determine whether sites are likely to lead to loss or mitigation would be probable. For example, a small site that is 80% covered by woodland may be more likely to require tree felling that a large site that presents plenty area for a viable development without needing to encroach onto wooded areas. Equally, a site may species and habitats throughout the site that are difficult to avoid, whilst other sites may only contain features to the edge of a site (e.g. hedgerows) which could be more easily avoided and mitigated / enhanced.</p>
SA10. To manage the landscape effects of development in recognition of the European Landscape Convention as well as the risks and opportunities associated with measures to address climate change.	<p>Landscape with very low sensitivity to change</p> <p>Landscape with low sensitivity to change</p> <p>Landscape with medium sensitivity to change</p> <p>Landscape with high sensitivity to change</p>	<p>The categories correspond to the overall landscape sensitivity classifications as set out in the Solihull Landscape Character Assessment (November 2016).</p>

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
SA11: To facilitate the delivery and enhance the quality of areas providing green infrastructure.	<p>Access to greenspace (<i>amenity open space, natural open space</i>)</p> <ul style="list-style-type: none"> • 400m from public open space or natural greenspace of at least 2ha in size • 2km from public open space or natural greenspace of at least 20 ha in size <p>Meets both standards Meets one standard Meets neither standard</p>	<p>A negative impact is scored where standards are not met as it would require further consideration of mitigation measures. In some instances development could enhance provision, but this is not assumed at this stage (to ensure consistency in appraisal).</p> <p>ANGST is considered a useful measure of the sustainability of locations, and is endorsed by Natural England.</p>
SA12. To enhance, conserve and protect buildings, sites and the setting of historic assets as part of development projects	<p>Proximity to heritage assets and impact upon Setting</p> <p><i>Heritage asset (listed building, ancient monument, registered parks and gardens, historic parkland, building of local interest) on site and likely to be lost as part of development. Development is likely to result in substantial harm to a designated heritage asset (NPPF, Paragraph 132 & PPG 01-7) arising as a result of the loss of a heritage asset or a considerable impact on its importance.</i></p> <p><u>Heritage assets within 100m of site:</u></p>	
SA13. To deliver improvements in townscape and enhance local distinctiveness.	<p>Development is likely to result in less than substantial harm to a heritage asset including its setting. The level of harm is likely to be effected by the proximity and likely compatibility of future development.</p> <p>Setting less likely to be adversely affected as the site is well screened / Heritage assets more than 100m from site and not likely to have a substantial effect upon the setting of a heritage asset.</p> <p>Development is unlikely to affect the significance of a heritage asset or provides a positive opportunity to enhance or better reveal that significance</p>	
SA14. Minimise air, soil, water, light and noise pollution.	<p>Amenity</p> <p>Sources of noise adjacent to site that could affect amenity (<i>A/B road, industrial park, agricultural processes</i>).</p> <p>No sources of noise adjacent to site</p>	<p>Undertaken using site visits, desktop analysis of mapping imagery and professional opinion.</p>
SA16. Improve the supply and affordability of housing (particularly in the areas of greatest need) <i>Housing sites only</i>	<p>Housing site deliverable within 0-5 years Deliverable within the plan period Deliverability uncertain</p>	<p>Provision of a higher level of development would contribute more significantly to the Borough's housing targets and would achieve economies of scale.</p> <p>It is important to recognise that availability may change over time.</p>

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
<p>SA17. To fully integrate the planning, transport, housing, cultural, recreational, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles.</p>	<p>Access to healthcare</p> <p>Within 400m of a GP or health centre</p> <p>Within 1200m of a GP or health centre</p> <p>Within 2.5km of a GP or health centre</p> <p>Within 5km of a GP or health centre</p> <p>More than 5km from a GP</p> <p>Access to leisure and play facilities (<i>allotments, parks, sports centres, play areas, cycle routes</i>)</p> <p>Within 400m of at least two facilities</p> <p>Within 400m of at least one facility</p> <p>Within 800m of at least two facilities</p> <p>Within 800m of at least one facility</p> <p>Within 1200m of at least two facilities</p> <p>Within 1200m of at least one facility</p> <p>More than 1200m of any facilities</p>	<p>The Manual for Streets suggests that 'walkable neighbourhoods' will typically have access to a range of services and facilities within 800m, with 1200m being the 'maximum reasonable walking distance'.</p>
<p>SA18. Reduce crime, fear of crime and anti-social behaviour.</p>	<p>Development in any location can be designed so as to effectively reduce crime and the fear of crime. Therefore, it is not proposed to include this as a criterion for comparing site options.</p> <p>However, development on derelict sites or open space that is a known target of fly-tipping or antisocial behaviour could help to tackle such issues. If consistent information is available for all sites we could establish if there are any such issues on site options. Due to a lack of objective information, this criterion has not been part of the site appraisal at this stage.</p>	

SA Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
<p>SA19. Encourage development with a better balance between jobs, housing and services, and provide easy and equitable access to opportunities, basic services and amenities for all.</p>	<p>Access to jobs (key economic assets)</p> <p><1200m <2.5km <5km <7.5km >7.5km</p> <p>Access to local convenience store or supermarket</p> <p><400m <800m 800-1200m 1.2km - 3km >3km</p>	

3. Alternative strategies for housing growth and distribution

3.1 Introduction

A crucial element of the Plan review process is to establish a suitable strategy for housing growth and distribution. This is important, as the successful legal challenge to the Plan means that there is no clear strategy for housing delivery in the Adopted Plan. The emergence of the UK Central Hub and HS2 Interchange as key growth areas for the Borough also needs to be supported by development in the right locations to ensure that communities benefit from the opportunities, whilst ensuring that the environment is protected and enhanced.

3.2 Housing growth

The starting point to identify an appropriate level of growth is to draw on the evidence of housing need for Solihull and the Housing Market Area (HMA) as a whole.

The strategic housing needs study (SHNS) for the whole HMA was undertaken in 2015. It indicated that there is a shortfall across the area of some 37,500 dwellings over the period 2011-2031. Under the Duty to Cooperate the Council has been working with its partners to address this shortfall. This shortfall included 2,654 dwellings arising from Solihull as the Council were not meeting their own needs. Whilst the outcome is yet to be finalised, a direction of travel that has received a measure of support is indicating that the Council ought to be testing, through this Local Plan review, the potential to accommodate a further 2,000 dwellings from the shortfall, in addition to accommodating the Borough's own needs.

Consideration of alternatives

In order to inform the Council's decision making process with regards to the level of housing growth, several alternatives were considered that covered a range of different growth scenarios.

Some alternatives were considered to be unreasonable, and therefore were not taken forward for further consideration in the SA. These are outlined below.

Unreasonable alternative a) Continue with the SLP 2013 Spatial Strategy, based on urban renaissance

This approach was rejected by the Council as it no longer has any strategic basis following RSS revocation & out of date Strategic Policy Framework. Furthermore, the projections in the SLP 2013 would not deliver scale of growth now required, and would not enable economic & social benefits of the HS2 Interchange to be maximised

Reasonable alternative a) Meet Local Needs only

This is considered to be a reasonable approach as it would address the identified Objectively Assessed Housing Need for Solihull (2016). Though this approach would not make a contribution to the wider housing market area (HMA) shortfall, it has been considered reasonable to test in the SA to demonstrate what effects such a strategy would have.

The Council's full objectively assessed need is based upon the 2014 based household projections published by DCLG in July 2016 and includes a 10% uplift due to market signals¹. This is set out in the 2016 Strategic Housing Market Assessment.

¹ This 10% uplift has also been applied to the SHNS expectations for the period 2011 to 2014.

Reasonable alternative b) Meet Local Needs plus, including an element of HMA shortfall (2000 dwellings)

This is considered to be a reasonable approach as it would address Objectively Assessed Housing Need for Solihull as well as making a contribution to wider housing market area (HMA) shortfall. Although there has been no formal memorandum of understanding on what the reasonable level of contribution would be, a direction of travel that has received a measure of support is indicating that the Council ought to be testing, through this local plan review, the potential to accommodate a further 2,000 dwellings from the shortfall, in addition to accommodating the Borough's own needs.

Under this approach the housing land provision target of 14,905 net additional dwellings (2014-2033) reflects the full objectively assessed housing need (OAN) for the Borough, a contribution to the wider HMA shortfall and an allowance to ensure consistency with the SHNS for the period 2011-14.

Reasonable alternative c) Meet local needs plus a higher contribution to the HMA shortfall (4000 dwellings)

This is considered to be a reasonable approach to test in the SA, as it would meet local needs as well as making a more significant contribution to the wider housing market area (HMA) shortfall.

3.3 Housing distribution

The Council identified a range of options in the Scope, Issues and Options document. However, none of these single options are capable of delivering the scale of growth and meeting needs across the Borough. Options B, C and F have limited capacity, so are not considered reasonable strategies to pursue.

There is insufficient capacity to meet the Borough's needs within the urban areas only, with limited opportunity for urban renewal, whilst increasing densities would have an adverse impact on the character of the Borough's residential areas.

The Council has identified five reasonable distribution options, which combine a number of different spatial approaches to housing delivery.

1. Focus on Urban Areas and Public Transport corridors and hubs
 - This approach would support strategic priorities in Solihull Connected and offers potential for sustainable locations and improvements to public transport services.
 - This approach could meet local needs, but would not make the most of the UK Central Masterplan or HS2 Growth Strategy.
2. Focus on Urban Areas and UK Central Hub and High Speed 2 Interchange area
 - Would support strategic priorities around UK Central/High Speed 2 Growth Strategy
 - May not have sufficient capacity to deliver higher levels of growth.
3. Focus on Urban Areas and Urban Extensions
 - There is significant potential capacity to meet local and wider HMA needs under such an approach.
4. Focus on Urban Areas, New Settlements, and significant expansion of Rural Settlements (part Option G)
 - There is significant potential capacity to meet local and wider HMA needs under such an approach.

5. Combination of spatial approaches

- Scope, issues and options (A, D, E & G) offers greatest potential for significant growth, and Option F for meeting local needs.
- This approach has significant potential capacity to meet local needs, and wider HMA needs.
- Would support strategic priorities around UK Central/High Speed 2 Growth Strategy and Solihull Connected.
- Would make contribution towards housing land supply in the short term

3.4 Combining growth and distribution alternatives

To give the growth options context, they have been combined with the reasonable forms of distribution identified above. This gives rise to twelve alternative approaches to the delivery of housing growth and distribution for the Borough.

	a) Meet needs 12,905	b) Meet needs + 14,905	c) Meet needs ++ 16,905
1. Focus on Urban Areas and Public Transport corridors and hubs	<i>Alternative 1a</i>	<i>Alternative 1b</i>	<i>Insufficient land to deliver this distribution at this level of growth</i>
2. Focus on Urban Areas and UK Central Hub and High Speed 2 Interchange area	<i>Alternative 2a</i>	<i>Insufficient land to deliver this distribution at this level of growth</i>	<i>Insufficient land to deliver this distribution at this level of growth</i>
3. Focus on Urban Areas and Urban Extensions	<i>Alternative 3a</i>	<i>Alternative 3b</i>	<i>Alternative 3c</i>
4. Focus on Urban Areas, New Settlements, and significant expansion of Rural Settlements	<i>Alternative 4a</i>	<i>Alternative 4b</i>	<i>Alternative 4c</i>
5. Combination of spatial approaches	<i>Alternative 5a</i>	<i>Alternative 5b</i>	<i>Alternative 5c</i>

3.5 Summary of appraisal findings

The twelve reasonable alternative strategies for housing growth and distribution have been appraised using the SA Framework. The full appraisal tables can be found in Appendix B, with a summary provided below:

Growth scenario A (Meet needs)

Alternative 2a is predicted to have the most positive outcomes for the regeneration, employment and transport objectives, which reflects the focus upon the strategic priorities of the UK Central Hub Area and the HS2. Alternatives 1a and 5a are also predicted to have positive effects on these areas, but at a lesser magnitude. Alternative 3 is predicted to have positive effects too for employment and transport, though would be less beneficial for regeneration. Alternative 4a performs the least positively, with a minor negative effect associated with transport, due to the more dispersed nature of development.

At this level of growth each of the distribution options perform fairly similarly under the resource use and environmental protection topics. There are mostly neutral effects on climate change mitigation, resilience and flooding. The effects upon biodiversity, green infrastructure and landscape are also similar for each distribution option, with option 3 performing the least positively due to significant effects upon landscape.

With regards to the built and historic environment, the alternatives perform differently with neutral and positive effects for alternatives 1a, 2a and 5a, and negative effects for 3a and 4a due to the potential to affect the character of urban fringes and the setting of heritage assets. Again, alternative 2a performs slightly better than the other alternatives with a moderate positive effect on the built environment. Having said this, alternative 2a performs the worst in relation to pollution, as it directs development to a focused geographical area, some of which is sensitive to noise, and congestion.

All five distribution options perform positively under the sustainable communities theme, with benefits for housing, health, social inclusion and accessibility across all five alternatives.

On balance, alternatives 2a and 5a are considered to perform the most favourably across the SA framework at this level of growth.

Growth Scenario B (Meet needs +)

Each of the alternatives perform broadly positively in terms of regeneration, employment and transport. At this level of growth though there are negative effects on transport for alternative 3b and 4b due to increased need for travel and / or traffic. The positive effects are most pronounced for 1b and 5b which focus on accessible locations,

At this level of growth each of the distribution options perform fairly similarly under the resource use and environmental protection topics. There are minor negative effects on greenhouse gases and resource use, attributable to a higher overall level of growth. Flooding presents an uncertain negative effect for 3b, 4b and 5b, with a minor negative for 1b, due to the need for increased release of land, some of which falls in close proximity to flood zones 2 and 3.

The alternatives have mixed effects upon biodiversity and green infrastructure, with negative effects predicted to represent an increased loss or disturbance of local wildlife sites and Green Belt. Positive effects are predicted though to reflect the potential for GI enhancement, Alternatives 1b and 5b are predicted to have minor positive and negative effects, but the effects for 3b and 4b are more pronounced, Whilst these alternatives have moderate negative effects, there is more scope for strategic green infrastructure improvement for 3b,

With regards to landscape and heritage, the picture is similar, with alternatives 3b and 4b having the most negative effects (moderate) compared to 1b and 5b (minor). Each alternative does have a minor positive effect though for landscape, to reflect the potential for enhancement or the avoidance of other sensitive parts of the Borough.

For the communities theme, each alternative performs broadly positively, with effects ranging from moderate to major positive for housing and health. Alternative 5b performs the most positively, reflecting the more balanced approach to growth, which ought to meet needs across the borough and contribute to improved health outcomes for a wider range of communities.

On balance, at this scale of growth, alternative 5b performs slightly better than alternative 1b. Both 3b and 4b generate a number of more prominent negative effects, and are therefore less favourable. Having said this, option 3 presents the greater opportunities for mitigation and enhancement.

Growth Scenario C (Meet needs ++)

At this scale of growth, the effects are exacerbated, with moderate to major positive effects on regeneration, employment and transport. At this level of growth though, the effects on travel / transport become moderately negative for 3c and 4c and minor negative for 5c, Alternative 5c performs the most favourably with regards to regeneration, as it takes a more balanced approach.

This scale of growth sees a more negative effect upon greenhouse gases and resource use across each alternative. There are also even greater negative effects upon environmental factors including biodiversity, landscape and heritage.

Overall, all three alternatives at this scale of growth present the potential for negative effects upon environmental factors which outweigh the slight improvement in performance against regeneration, economic growth and social progress (improved housing and health outcomes).

3.6 Outline reasons for selecting the preferred approach

Each alternative under Growth Scenario A has been rejected, as they would not make any contribution to the wider housing market area shortfall in housing. This would likely result in a failure of Duty to Cooperate, and would not maximise the strategic opportunities offered by the UK Central Hub and HS2 Interchange.

Each alternative under Growth Scenario C has been rejected by the Council. At this level of growth, there could be disproportionate social and environmental effects in the Borough, as identified in the SA. Furthermore, there may be more appropriate locations for growth around the conurbation and beyond.

The preferred rate of housing growth is that identified under Growth Scenario B. The housing land provision target of 14,905 net additional dwellings (2014-2033) reflects the full objectively assessed housing need (OAN) for the Borough, a contribution to the wider HMA shortfall and an allowance to ensure consistency with the SHNS for the period 2011-14. This target has been weighed against the Borough's capacity for growth over the plan period.

The Council's preferred distribution strategy reflects alternative 5b. This provides a balanced approach to development, by dispersing growth to accessible locations but also taking advantage of the opportunities offered by the UK Central Area Hub Area and the High Speed 2 Interchange. The preferred approach has capacity to meet local housing needs as well as an element of the wider HMA shortfall. There are sites available under this strategy to contribute towards the housing supply in the short term.

Alternatives 3b and 4b were discarded for the following outline reasons:

- Neither alternative would make the most of the UK Central Masterplan or HS2 Growth Strategy which seek to maximise economic and social benefits of major growth opportunities within the UK Central Hub Area. These alternatives would not necessarily support strategic priorities in Solihull Connected or enable public transport improvements.

As well as the reasons outlined for Alternatives 3b and 4b, alternative 4c was rejected as there are limited opportunities for new settlements to support this scale of growth.

4. Alternative site options

4.1 Introduction

To identify appropriate sites to help deliver the preferred strategy a Call for Sites exercise was undertaken inviting landowners and others to make submissions where land may be available for development. Over 240 site submissions were made up to May 2016, when the submissions were passed to the consultants undertaking a Strategic Housing and Employment Land Availability Assessment on behalf of the Council. This exercise has helped to identify what land may be available for development during the Plan period.

The process of identifying reasonable site alternatives is detailed within Topic Paper 4 (November 2016). In summary, this explains how the site options were identified (through the call for sites and SHELAA), and what ‘filtering’ was undertaken to remove unreasonable site options. The following hierarchy of preference was applied to sieve the long list of sites. This led to some isolated site options being discarded, as they would not contribute to any of the alternative spatial options for housing.

Priority	Category
1	Non Green Belt previously developed land
2	Non Green Belt greenfield if not in a reasonable beneficial existing use.
3	Green Belt previously developed land in a highly or moderately accessible location
4	Green Belt greenfield if highly or moderately accessible location and is being lost as a result of committed development.
5	Green Belt greenfield that is either (a) located adjacent to the urban area or a highly accessible settlement or (b) located adjacent to a settlement that although may be less accessible has a wide range of local services or (c) is a proportionate addition adjacent to an existing settlement that although is less accessible has a range of services available within it.
6	Low priority – i.e. none of the above

A number of site options were amalgamated to larger site areas to reflect the broad areas for sustainable urban extensions or settlement expansion.

4.2 Site appraisal findings

The remaining site options were appraised using the site appraisal framework. The findings are summarised in the tables below. A detailed proforma for each site is provided in **Appendix C**.

The preferred site options are prefixed with PO, whilst the alternative site options are prefixed with initials to represent their location. For example, BC = Balsall Common, CB = Catherine de Barnes.

Colour code	Symbol	Significance of effects
Dark green	✓✓	Significant positive effects more likely
Light green	✓	Positive effects likely
Grey	-	Neutral effects
Amber	✖	Negative effects likely / mitigation necessary
Red	✖✖	Significant negative effects likely / mitigation essential

AECOM ID	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
15	SLP29	Land North of Clock Interchange, Bickenhill	Yellow	Red	Grey	Green	Green	Grey	Grey	Grey	Grey	?	Yellow	Grey	Yellow	Yellow	Green	Green	Green
16	SLP28	Chep / Higginson, Land at Bickenhill Lane	Yellow	Yellow	Grey	Green	Green	Grey	Grey	Grey	Grey	?	Yellow	Grey	Yellow	Yellow	Green	Green	Green
18	SLP27	Fore, A34 adjacent M42	Yellow	Grey	Grey	Green	Green	Grey	Grey	Grey	Yellow	?	Green	Grey	Yellow	Green	Green	Green	Green
19	SLP25	TRW, Stratford Road, Shirley	Yellow	Green	Green	Green	Green	Grey	Grey	Grey	Grey	?	Grey	Grey	Yellow	Green	Green	Green	Green
20	SLP31	Birmingham Business Park Extension	Yellow	Yellow	Grey	Green	Green	Grey	Grey	Grey	Grey	Grey	Yellow	Grey	Grey	Green	Green	Green	Red
44	SLP11	Powergen	Yellow	Green	Grey	Green	Green	Green	Grey	Yellow	Grey	?	Yellow	Grey	Yellow	Green	Green	Green	Green
45	SLP8	Solihull Town Centre	Yellow	Green	Green	Green	Green	Green	Grey	Yellow	Grey	?	Grey	Red	Yellow	Green	Green	Green	Green
46	SLP10	Blythe Valley Park	Yellow	Yellow	Grey	Green	Green	Red	Grey	Yellow	Yellow	Yellow	Green	Grey	Yellow	Yellow	Green	Green	Green
27	SLP3	Simon Digby	Grey	Grey	Grey	Green	Green	Green	Grey	Yellow	Grey	Yellow	Grey	Grey	Yellow	Green	Green	Green	Green
34	SLP9	122 Chelmsley Lane / Coleshill Road	Yellow	Green	Grey	Green	Green	Green	Grey	Grey	Yellow	Grey	Yellow	Grey	Yellow	Green	Green	Green	Green
29	SLP19	179 & 33 Riddings Hill	Yellow	Yellow	Grey	Green	Green	Grey	Yellow	Grey	Grey	?	Yellow	Grey	Grey	Green	Green	Red	Green
43	SLP24	80 Meriden Road	Yellow	Grey	Yellow	Green	Green	Grey	Grey	Grey	Grey	Grey	Yellow	Grey	Grey	Green	Green	Red	Red
Balsall Common																			
76	BC1	Grange Farm, between Kenilworth Road and Needlers End Lane	Yellow	Grey	Grey	Green	Green	Red	Grey	Grey	Green	Yellow	Yellow	Yellow	Yellow	Green	Green	Red	Green
79	BC2	North of Balsall Common, Kenilworth Road and Wootton Green Lane	Yellow	Yellow	Grey	Green	Green	Grey	Grey	Grey	Grey	Yellow	Yellow	Grey	Yellow	Green	Green	Yellow	Green

AECOM ID	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
55	BC3	South-east of Balsall Common, Hob Lane, Kelsey Lane and Waste Lane	Yellow	Grey	Green	Green	Green	Grey	Yellow	Grey	Grey	Grey	Yellow	Grey	Yellow	Grey	Green	Red	Red
72	BC4	Balsall Street	Yellow	Green	Green	Green	Green	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Grey	Green	Red	Grey
Catherine de Barnes																			
50	CB1	Land at Bickenhill Lane, Hampton Lane and Lugtrout Lane	Yellow	Grey	Grey	Green	Grey	Grey	Grey	Grey	Grey	Grey	Yellow	Yellow	Grey	Grey	Green	Green	Green
Dickens Heath																			
48	DH1	Land between Dickens Heath and Tidbury Green	Yellow	Green	Grey	Green	Grey	Green	Grey	Yellow	Green	Yellow	Grey	Yellow	Grey	Green	Green	Grey	Green
Hampton in Arden																			
63	HA1	Old Station Road, Hampton in Arden	Yellow	Green	Yellow	Green	Grey	Grey	Grey	Grey	Grey	Grey	Yellow	Yellow	Grey	Green	Green	Green	Grey
68	HA2	Hampton Manor, Hampton in Arden	Yellow	Green	Yellow	Green	Grey	Grey	Grey	Grey	Yellow	Grey	Yellow	Red	Grey	Green	Green	Green	Green
65	HA3	Meriden Road/Diddington Lane , Hampton in Arden	Yellow	Grey	Yellow	Green	Grey	Grey	Grey	Yellow	Yellow	Grey	Yellow	Yellow	Grey	Green	Grey	Grey	Grey

AECO MID	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
Kinghurst																			
75	KH1	Endeavour House and Pavilions, Kinghurst																	
Knowle																			
52	KN1	Land at Kenilworth Road, Knowle																	
56	KN2	Land around Warwick Road, junction 5, M42																	
80	KN3	Copt Heath Golf Club, between Lady Byron Lane, Warwick Road and Tilehouse Green, Knowle																	
54	KN4	Land at Smiths Lane and Widney Manor Road																	
Dorridge																			
60	DO1	East of Dorridge, land between Blue Lake Road, Grove Road and Norton Green Lane																	
58	DO2	South-west Dorridge, off Earlswood Road and Four Ashes Road																	
Meriden																			
61	ME1	East of Meriden, between Fillongley Road and Main Road																	
47	ME2	North of Fillongley Road, Meriden																	
74	ME3	South of Meriden, Berkswell Road																	
Shirley																			
53	SH1	Land between Shirley and Dickens Heath																	

	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
Cheswick Green																			
73	CG1	Winterton Farm, between Cheswick Green and Blythe Valley Park	Yellow	Green	Grey	Green	Green	Red	Grey	Yellow	Green	Yellow	Green	Yellow	Grey	Green	Green	Green	Green
51	CG2	North/north-east of Cheswick Green off Creynolds Lane and Tanworth Lane	Yellow	Green	Green	Green	Green	Red	Grey	Yellow	Grey	Yellow	Green	Yellow	Yellow	Green	Green	Green	Green
69	CG3	West of Blythe Valley Park, land at Warings Green Lane	Yellow	Green	Grey	Grey	Grey	Grey	Grey	Grey	Green	Yellow	Grey	Grey	Grey	Green	Green	Green	Green
Bickenhill																			
64	BI1	Land south/south-west of HS2 Interchange Area and A45	Yellow	Yellow	Grey	Green	Green	Red	Grey	Grey	Grey	Grey	Grey	Grey	Yellow	Grey	Green	Green	Grey
78	BI2	Land west of Damson Parkway and south of A45	Yellow	Yellow	Grey	Green	Green	Green	Grey	Grey	Yellow	Grey	Green	Yellow	Yellow	Green	Green	Green	Grey
South-east of Chelmsley Wood																			
66	CW1	Land between Chelmsley Wood and Birmingham Business Park, Coleshill Heath Road	Yellow	Green	Grey	Green	Green	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Yellow	Green	Green	Green	Green
62	CW2	Land at Bickenhill Road and Coleshill Road	Green	Green	Grey	Green	Green	Red	Grey	Yellow	Yellow	Grey	Grey	Grey	Yellow	Green	Green	Green	Green
M42 corridor																			
71	SH2	Land around Stratford Road/junction 4 M42	Yellow	Yellow	Grey	Green	Green	Red	Grey	Yellow	Green	Grey	Green	Yellow	Yellow	Grey	Green	Green	Green
St Alphege																			
57	SA1	Land east of Widney Manor station at Widney Manor Road and Lovelace Avenue	Yellow	Green	Grey	Green	Grey	Grey	Grey	Yellow	Grey	Grey	Green	Yellow	Grey	Grey	Grey	Grey	Red
Hockley Heath																			
67	HH1	Box Trees, Kineton Lane, Stratford Road, Dorridge/Hockley Heath	Yellow	Yellow	Grey	Green	Green	Red	Grey	Yellow	Green	Yellow	Green	Red	Yellow	Grey	Grey	Green	Grey

	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
59	HH2	West of Hockley Heath, off School Road and Stratford Road	Yellow	Green	Grey	Green	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Yellow	Yellow	Green	Green	Green
70	HH3	Land north of Earlswood station, Rumbush Lane and Wood Lane	Yellow	Yellow	Grey	Green	Grey	Red	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Grey	Green	Green	Red
Chadwick End																			
86	CE1	Land at Chadwick End, off Warwick Road and Netherwood Lane	Yellow	Red	Grey	Green	Yellow	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Yellow	Green	Yellow	Grey
Berkswell																			
83	BE1	Land at Coventry Road and Spencers Lane, Berkswell	Yellow	Green	Grey	Green	Grey	Yellow	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Grey	Grey	Red	Yellow	Green
82	BE2	Berkswell Quarry, Cornets End Lane and Kenilworth Road	Yellow	Yellow	Grey	Green	Grey	Red	Yellow	Yellow	Green	Yellow	Yellow	Red	Grey	Grey	Red	Grey	Red
85	BE3	Former Berkswell Quarry, Cornets End Lane	Yellow	Yellow	Grey	Green	Grey	Red	Yellow	Grey	Green	Yellow	Yellow	Red	Grey	Grey	Red	Grey	Red
84	BE4	Lincoln Farm Café and Lorry Park, Kenilworth Road, Berkswell	Yellow	Yellow	Grey	Red	Green	Grey	Yellow	Red	Yellow	Yellow	Yellow	Grey	Yellow	Grey	Red	Grey	Red
81	BE5	Land at Lavender Hall Farm, Lavender Hall Lane, Berkswell	Yellow	Grey	Grey	Green	Green	Grey	Yellow	Grey	Grey	Yellow	Yellow	Yellow	Grey	Green	Green	Red	Green
49	BE6	Land at Back Lane/Broad Lane, Berkswell	Yellow	Yellow	Yellow	Green	Grey	Grey	Yellow	Grey	Grey	Yellow	Yellow	Grey	Grey	Yellow	Red	Red	Grey
Tidbury Green																			
77	TG1	East of Tidbury Green, Cleobury Lane and Norton Lane	Yellow	Green	Grey	Green	Grey	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Green	Green	Grey	Grey
Preferred Options																			
97	PO 1	Barratts Farm	Yellow	Grey	Green	Green	Green	Red	Yellow	Grey	Yellow	Grey	Grey	Red	Grey	Green	Green	Red	Green
98	PO 2	Frog Lane	Yellow	Green	Green	Green	Grey	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Green	Green	Red	Grey
99	PO 3	Windmill Lane - Kenilworth Road	Yellow	Green	Green	Green	Grey	Yellow	Grey	Grey	Grey	Yellow	Yellow	Yellow	Grey	Green	Green	Red	Grey
87	PO 4	West of Dickens Heath	Yellow	Green	Grey	Green	Grey	Green	Grey	Grey	Green	Yellow	Grey	Grey	Grey	Green	Green	White	Green

	Site ID	Site Name	SA1. Regeneration and economic development	SA2a. Distance to Primary School	SA2b. Distance to Secondary School	SA3a. Proximity to bus and train services	SA3b. Proximity to principal road network	SA4a. Soil	SA4b. Minerals	SA7. Flooding	SA9. Enhance ecological sites	SA10. Landscape sensitivity	SA11. Enhance green infrastructure	SA12. Enhance and protect historic assets	SA14. Amenity	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b. Distance to convenience stores or supermarket
	101	PO 5	Chester Road/ Moorend Avenue																
	96	PO 6	Meriden Road																
	102	PO 7	Kingshurst Village Centre									?							
	91	PO 8	Hampton Road																
	92	PO 8	Hampton Road																
	90	PO 9	South of Knowle																
	100	PO 10	West of Meriden																
	103	PO 11	Former TRW site									?							
	89	PO 12	South of Dog Kennel Lane																
	88	PO 13	South of Shirley																
	106	PO 14	Arran Way									?							
	107	PO 15	Jensen House, Auckland Drive									?							
	93	PO 16	East of Solihull																
	105	PO 17	Moat Lane, Vulcan Road									?							
	104	PO 18	Sharmans Cross Road									?							
	95	PO 19	UK Central Hub/HS2 interchange								?								
	94	PO 20	Land Damson Parkwa																

5. Appraisal of Local Plan Policies

Each Policy within the draft Plan has been appraised against all nineteen objectives in the SA Framework. The significance of the effects has been identified using a combination of effects characteristics as outlined in table 5.1 below.

For each SA objective, the guiding questions and overall objective have been used to establish the characteristics of the effects in term of their duration, scale, likelihood, reversibility, nature and spatial distribution. The combination of these effects gives rise to the significance score, which ranges from major positive to major negative.

Table 5.1: Determining the significance of effects

Duration	Scale	Likelihood	Direct/Indirect/ Cumulative	Reversibility	Positive/ Neutral/ Negative	Significance of effects	Spatial Distribution	Social Equity
<3 years	Local	Unlikely	None	Yes	+ve	Maj+ve	Core Areas	Ethnicity / Race
3-10 years	Borough	Potential	Direct	Unk	-ve	Mod+ve	Regen Areas	Gender
>10 years	Regional	Likely	Indirect	No	-	Min+ve	Urban	Disability
Permanent	National	Definite	Cumul	-	-	Neutral	Rural	Age
-	International	-	-	-	-	Min-ve	All	Multiple
-	-	-	-	-	-	Mod-ve	-	-
-	-	-	-	-	-	Maj-ve	-	-

For each policy, a summary of the appraisal findings is presented in the form of a 'spider' diagram. A score of 0 represents neutral effects, whilst a score of +3 is a major positive and a score of -3 is a major negative. The most positive outcome would be for the entire 'web' to be shaded green. This would represent a major positive effect against all nineteen SA Objectives (this is unrealistic, but aids in explanation of how to interpret the spider diagrams). The most negative outcome would be for none of the web to be shaded. This would mean that negative effects were predicted for every SA objective.

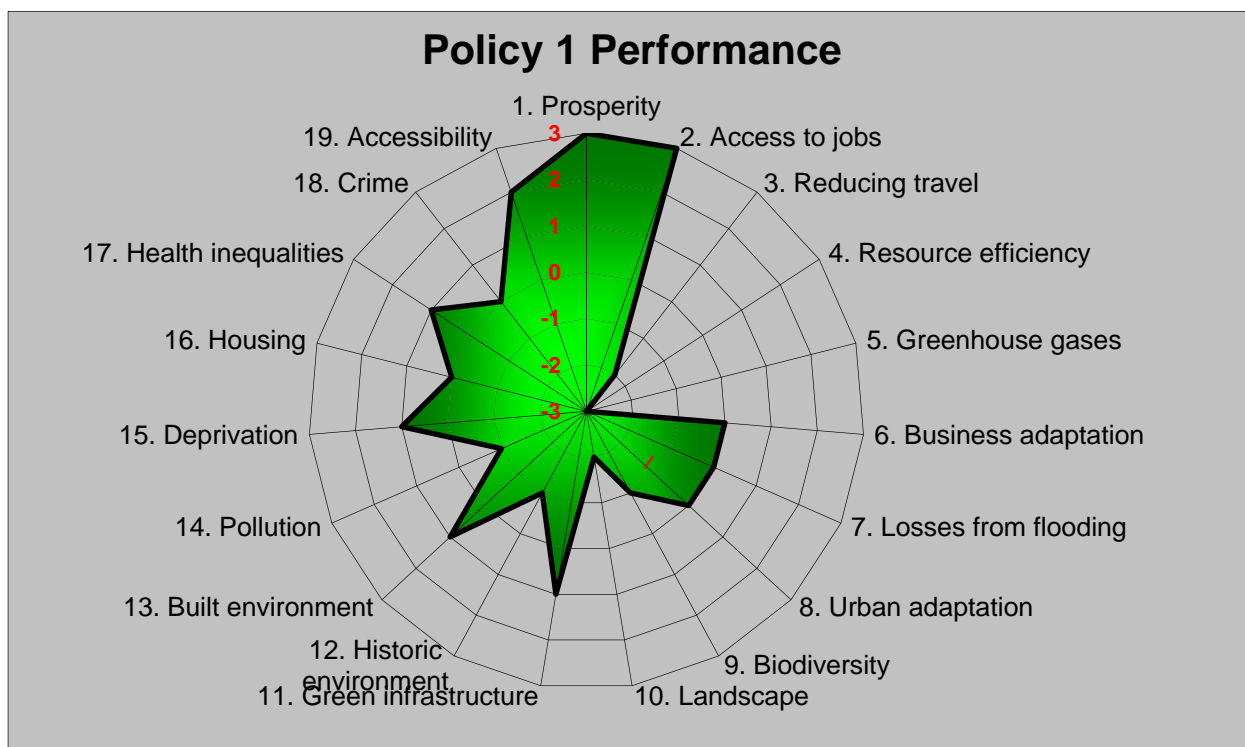
To assist in the interpretation of the diagrams (and to provide justification for forecast effects) a discussion is provided if moderate or major effects are identified. A summary of all the effects is also provided, which includes consideration of potential mitigation and enhancement measures.

5.1 Appraisal of Policy 1: UK Central Hub Area

5.1.1 Forecast Effects

This policy performs in a slightly positive manner with six beneficial outcomes comprising two major positives, one moderate and four minor positives as illustrated in Figure 5.2. Conversely, eight of the 19 sustainability objectives report an adverse outcome (two major, two moderate and three minor negative). These negative effects relate mainly to the potential for negative effects on the environment and an increase in greenhouse gas emissions.

Figure 5.2. Sustainability Appraisal: Policy 1



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Maj +ve	Policy supports Birmingham Airport, NEC, Arden Cross, Birmingham Business Park and JLR and provides for controlled diversification of employment opportunities.
2. Access to jobs	Maj +ve	Policy is likely to reduce difficulties to access employment through the provision of improved connectivity within and beyond the growth area.
4. Resource efficiency	Maj -ve	Efficiencies gained by exploiting existing employment centres given established networks, but the international scale of the UK Central offer is likely to attract premier employers and thus attract employees from a wide hinterland ultimately supported by HS2 and additional transport infrastructure provision.
3. Reducing Travel	Mod -ve	Whilst the policy promotes the use of transport other than the private car, and contributing towards the strategic green infrastructure network across the Hub area, it encourages the provision of additional infrastructure and therefore extends the travel to work area.

SA Objective	Likely Significance Effects	Rationale
5. Greenhouse gases	Maj -ve	The policy encourages the use of sustainability principles including minimising the use of natural resources and the use low carbon and renewable energy principles. Despite the potential to deliver exemplar green buildings, and the provision of green infrastructure, the likelihood of extensive car based commuting is anticipated to dominate greenhouse emissions.
10. Landscape	Mod -ve	The current general requirement to protect and enhance the natural environment anticipated to be supported by a strong landscape policy nevertheless potential for adverse effects upon urban fringe landscapes given the considerable land use change and additional infrastructure that would be required. Should the policy framework strongly support effective landscape integration then a minor adverse effect may result over the medium term as the new infrastructure and landscape measures become established.
19. Accessibility	Mod +ve	Access by private and public transport is good, as well as helping improve accessibility in regeneration areas.

<i>Local</i>	7	<i>Unlikely</i>	0	<i>Direct</i>	6	<i>Positive</i>	6	Maj +ve	2
<i>District</i>	3	<i>Potential</i>	7	<i>Indirect</i>	7	<i>Negative</i>	8	Mod+ve	1
<i>Regional</i>	3	<i>Likely</i>	7	<i>Cumul</i>	1	<i>Neutral</i>	5	Min+ve	4
<i>National</i>	1	<i>Definite</i>	0					Neutral	5
								Min-ve	3
								Mod-ve	2
								Maj -ve	2

The effects arising from the policy are anticipated to extend over the medium to long term (i.e. typically longer than three years and often greater than ten years). While most of the effects are at a local scale there are seven at a Borough or regional scale that reflect the importance of the sites and commercial activities being undertaken. Eight of the impacts are direct with seven being indirect and the effects on greenhouse gases being a cumulative effect.

The policy was considered to have the potential for beneficial effects upon deprivation, since diversifying the range of business activities is likely to provide some opportunities for residents from North Solihull. Enhanced revenues from successful business areas could also support measures to reduce deprivation. The number of people with difficulties in accessing employment potentially may be reduced as development proposals within the growth area will be expected to demonstrate connectivity and contribution towards infrastructure provision.

In parallel with the increased employment opportunities, the policy does not specifically provide for measures to promote travel plans, or to take account of the impacts on the highway network. Though public transport and other modes of transport are supported through other plan policies, a minor negative effect is predicted as the need to travel would remain for some people who gain employment in the UK Central Hub Area (especially those outside of the Borough or in the more rural areas).

In terms of the climate change and energy sustainability theme the policy does not provide any reference to the requirement to reduce greenhouse gas emissions, business adaptation, measures to reduce economic losses from flooding or urban adaptation to climate change. Despite the potential to deliver exemplar green buildings, and the provision of green infrastructure, the likelihood of extensive car based commuting is anticipated to dominate greenhouse emissions.

The proposed policy performs poorly under the natural resource protection and environmental enhancement theme with the potential for moderate adverse effects upon landscape due to the removal of land from the green belt. Green infrastructure and the built environment have potential for minor beneficial effects due to the requirement to demonstrate contribution towards green infrastructure. There may be adverse effects upon the historic environment.

As the policy does not seek to promote exemplar design standards few enhancements to local distinctiveness will be required. However, other plan policies do require local character to be respected and enhanced.

There is no direct requirement to minimise and mitigate environmental impacts, traffic noise and emissions, drainage and site runoff as well as light pollution affecting the rural fringe. However other plan policies do consider such potential effects, and would help to minimise any negative effects.

The policy makes little reference to the delivery of sustainable communities, although the creation of additional jobs may provide opportunities for some able to travel from the regeneration areas. Generally, the development promotes car based travel and given the regional scale of the employment opportunities, employees may well be drawn disproportionately from beyond the boundaries of the Borough. The Plan contains several policy measures to try to counter such effects.

5.1.2 Uncertainty

Seven of the fourteen predicted outcomes are considered to be 'likely' to be delivered and seven of the outcomes are predicted to be 'potential' outcomes. The level of certainty for the effects is therefore fairly high.

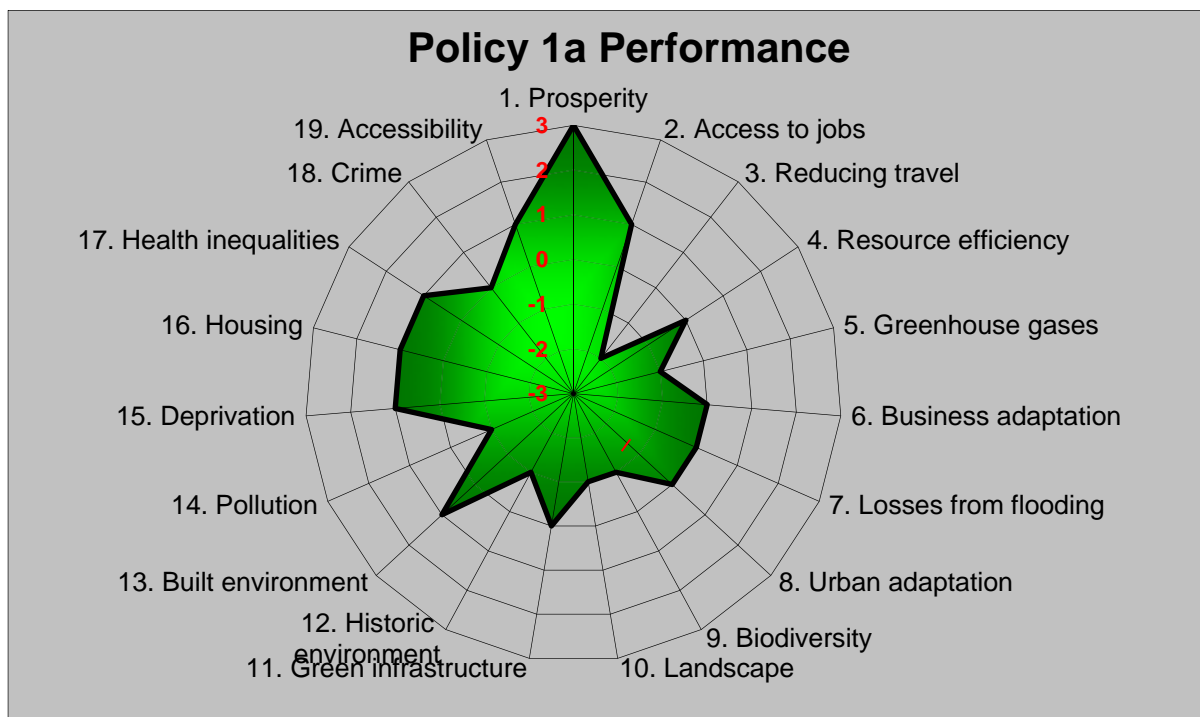
5.2 Appraisal of Policy 1A: Blythe Valley Business Park

5.2.1 Forecast Effects

The Blythe Valley policy is expected to be positive overall with one major positive effect and six minor positive effects. This is balanced against five minor negative effects and one moderate negative (see Figure 5.3 below). The remaining six outcomes are neutral.

There is the potential to positively impact on prosperity through access to jobs and improvements to commercial assets. The policy encourages development within the Business Park but makes no reference to mitigating the greenhouse gases associated with such construction activities and has the potential to negatively impact on local biodiversity, landscape and the historic environment.

Figure 5.3. Sustainability Appraisal: Policy 1A



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Maj +ve	Policy supports Blythe Valley Business Park and provides for controlled diversification of employment opportunities.
3. Reducing travel	Mod-ve	Whilst the policy promotes the consideration of connectivity to facilities beyond the business park, it does not lock in sustainable modes or promote travel plans.

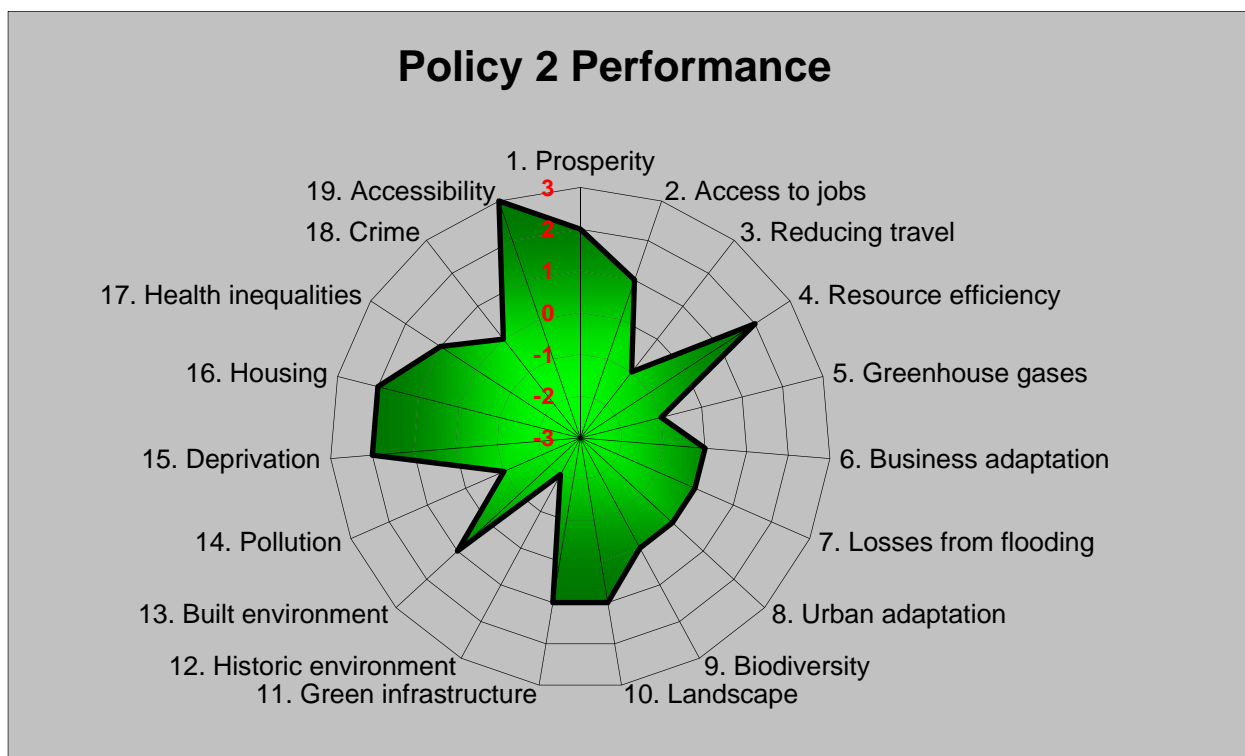
Local	11	Unlikely	0	Direct	5	Positive	7	Maj +ve	1
District	1	Potential	10	Indirect	7	Negative	6	Mod+ve	0
Regional	1	Likely	3	Cumul	1			Min+ve	6
National	0	Definite	0					Neutral	6
								Min-ve	5
								Mod-ve	1
								Maj -ve	0

5.3 Appraisal of Policy 2: Maintain Strong, Competitive Town Centres

5.3.1 Forecast Effects

Overall, the town centre policy performs in a beneficial way. It is expected to give rise to one major beneficial outcome, four moderate beneficial outcomes and five minor beneficial effects (see Figure 5.4). There is one moderate adverse effect (historic environment) and three minor negative effects. These are associated with the absence of measures dealing with reducing travel, greenhouse gas emissions and potentially negative effects from noise and air pollution affecting local residents. The remaining five outcomes are predicted to be neutral.

Figure 5.4. Sustainability Appraisal: Policy 2



SA Objective	Likely Significance of Effects	Rationale
1. Prosperity	Mod +ve	Expansion of retail premises together with local housing and improved connectivity is likely to assist targeted communities and enhance local prosperity.
4. Resource efficiency	Mod +ve	Potential to support efficient use of land and reduce the demand for out of town commercial development despite pressures that may emerge due to HS2 Interchange and the Hub.
12 Historic Environment	Mod -ve	No reference to encouraging local distinctiveness or a policy towards conservation areas and listed buildings.
15. Deprivation	Mod+ve	With introduction of new housing, the policy has the potential to help disadvantaged communities by providing housing close to work and retail needs.
16. Housing	Mod+ve	Policy assists with provision of a diverse housing offer that could contain an affordable housing element.
17. Accessibility	Maj+ve	Policy promotes mixed development in town centre as well as major improvements to public transport hubs, and modal shift.

<i>Local</i>	9	<i>Unlikely</i>	0	<i>Direct</i>	9	<i>Positive</i>	10	Maj +ve	1
<i>District</i>	5	<i>Potential</i>	4	<i>Indirect</i>	4	<i>Negative</i>	4	Mod+ve	4
<i>Regional</i>	0	<i>Likely</i>	10	<i>Cumul</i>	1			Min+ve	5
<i>National</i>	0	<i>Definite</i>	0					Neutral	5
								Min-ve	3
								Mod-ve	1
								Maj -ve	0

In terms of the sustainable consumption and production theme, the policy offers a beneficial outcome with two moderate beneficial outcomes (prosperity and resource efficiency, as well as minor beneficial effects on access to jobs). In terms of the reducing travel objective, private parking in the town centre is accepted where there is an operational need. Additional public parking is accepted where there is insufficient public parking. This suggests parking capacity will expand to meet need and hence do little to reduce the need to travel, although the location of town centre development would make efficient use of existing infrastructure.

The policy offers a negative outcome for climate change and energy with no measures being provided for reducing CO₂ emissions with expanding car parking potentially leading to increased emissions. Also, there are no drivers provided to deliver urban adaption to climate change.

The sustainability theme on natural resource protection & environmental enhancement receives mixed support from the policy. The requirement to enhance the public realm in Shirley Town Centre and Chelmsley Wood may deliver some landscape improvements although there is little indication that the landscape effects of development are to be considered or the opportunities to address climate change.

5.3.2 Uncertainty

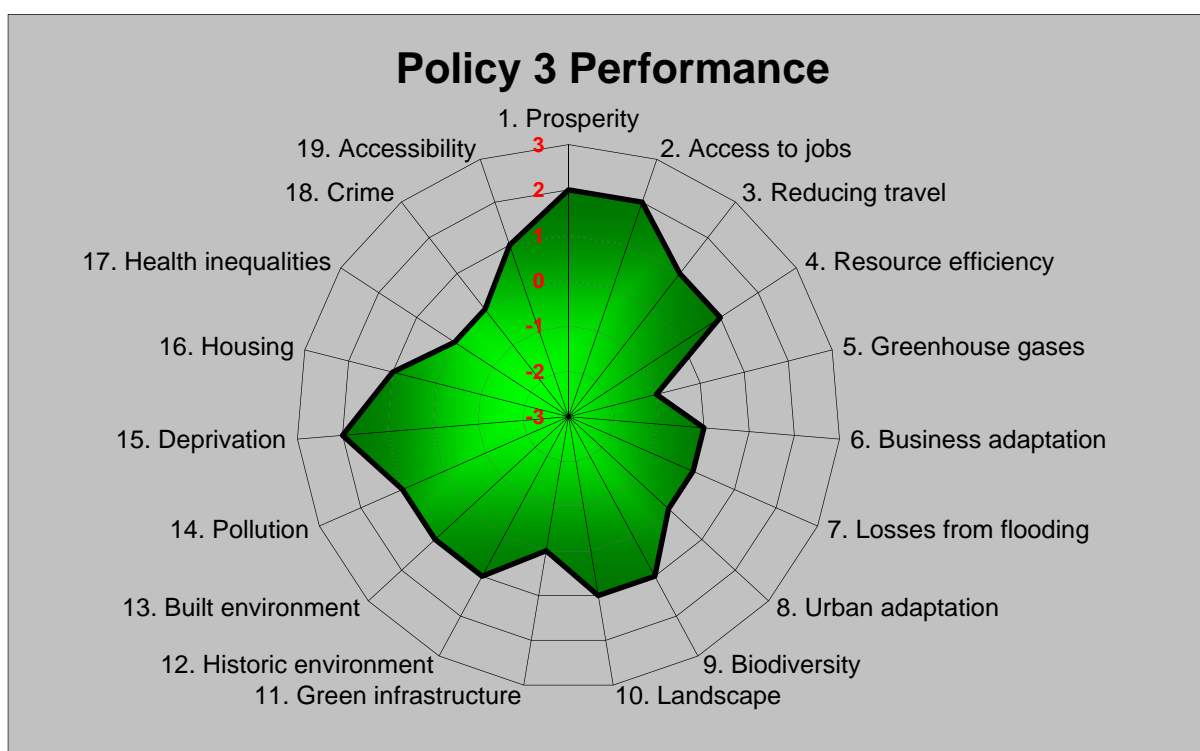
Of the fourteen significant effects, ten are considered to be 'likely' to occur, suggesting that there is a degree of certainty in the forecasts. There are only four outcomes (each positive) that are considered to be 'potential'; which are, landscape, green infrastructure, historic environment and health inequalities. This relates to the extent to which enhancements would be secured.

5.4 Appraisal of Policy 3: Provision of Land for General Business and Premises

5.4.1 Forecast Effects

This policy is envisaged to give rise to three moderate beneficial effects and nine minor beneficial effects and one minor negative effect (greenhouse gases and pollution). The remaining six are neutral with the exception of a minor negative for greenhouse gases (see Figure 5.5). The outcomes are split between direct effects (eight) and four indirect with one cumulative effect (greenhouse gases). The majority of the impacts are local in scale with three being considered borough -wide.

Figure 5.5. Sustainability Appraisal: Policy 3



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Mod +ve	Policy provides for the potential to allow small-scale supporting facilities as well as specific measures to encourage the small and medium sized enterprises.
2. Access to jobs	Mod +ve	Identifies the importance of access to business development with developers having to demonstrate how the generated employment will help meet local needs and support employment locally and help sustain small and medium sized businesses.
15. Deprivation	Mod +ve	References to demonstrating support for small and medium sized businesses, support to employment locally, and meeting local employment needs.

<i>Local</i>	9	<i>Unlikely</i>	0	<i>Direct</i>	8	<i>Positive</i>	12	Maj +ve	0
<i>Borough</i>	4	<i>Potential</i>	7	<i>Indirect</i>	4	<i>Negative</i>	1	Mod+ve	3
<i>Regional</i>	0	<i>Likely</i>	6	<i>Cumul</i>	1			Min+ve	9
<i>National</i>	0	<i>Definite</i>	0					Neutral	6
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

The policy is likely to provide moderate beneficial outcomes (prosperity and access to jobs) but only has the potential to reduce the need to travel. The climate change and energy sustainability theme is not addressed nor are measures promoted to reduce greenhouse gas emissions or adaptation to climate change.

The outcome of the policy upon the natural resource protection and environmental enhancement sustainability objective is broadly positive with five minor positive outcomes. It is noted that this outcome is due to the requirement not to undermine the quality and character of the natural environment, i.e. to prevent adverse effects. There are no positive obligations to enhance biodiversity, contribute towards the provision of green infrastructure or to protect/enhance the historic and built environment.

As the policy makes reference to supporting small and medium sized businesses, support to employment locally and meeting local employment needs with North Solihull as a priority, it is likely to deliver a moderate beneficial outcome for the deprivation objective but does not provide any support to address health inequalities, crime and public safety.

5.4.2 Uncertainty

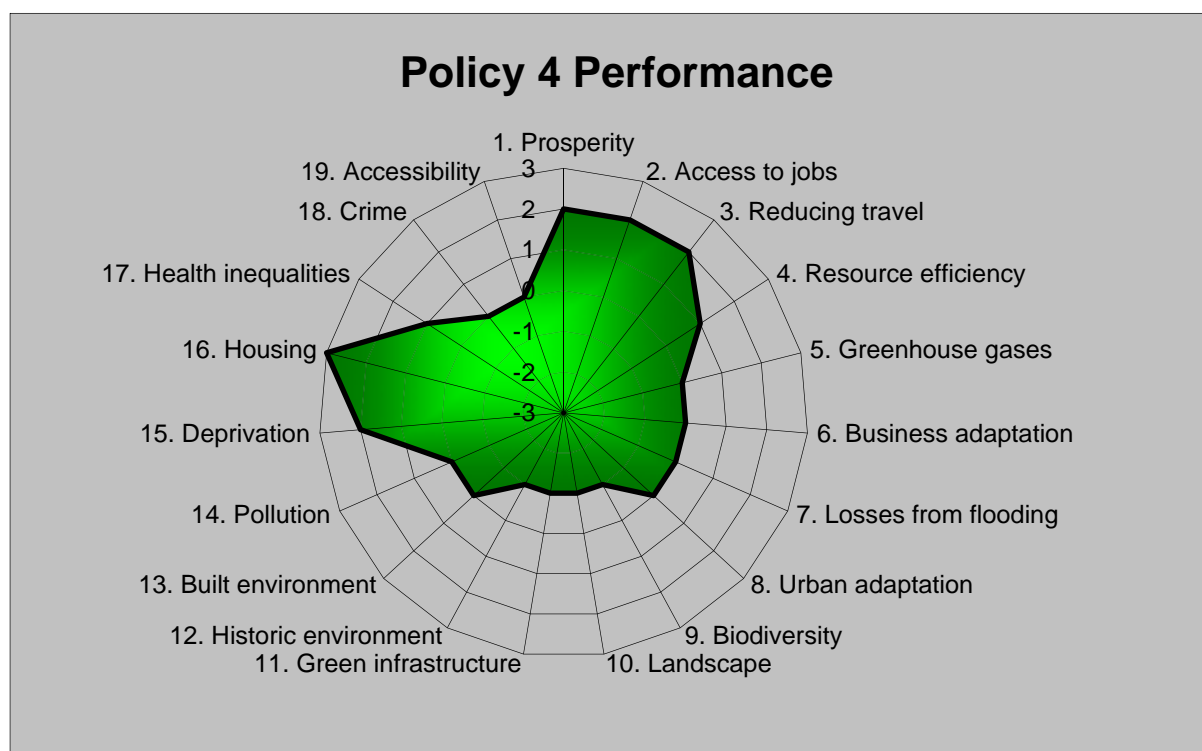
Of the significant effects assumed to arise seven are potential effects and six are considered to be likely outcomes. Therefore, there is a degree of uncertainty about the outcomes.

5.5 Appraisal of Policy 4: Meeting Housing Needs

5.5.1 Forecast Effects

Overall, this policy performs in a mixed manner. One of the nineteen sustainability objectives reports a major beneficial outcome (housing) and there are four moderate beneficial outcomes and two minor positive outcomes (see Figure 5.6). However, there are also four minor adverse outcomes associated with potential effects on the environment. Eight of the consequences across the sustainability objectives are considered to be neutral.

Figure 5.6. Sustainability Appraisal: Policy 4



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Mod +ve	Affordable housing could potentially assist people to locate closer to employment or have resources to travel to work.
2. Access to jobs	Mod +ve	Increased market and affordable housing provision is likely to help people find accommodation closer to areas with job opportunities.
3. Reducing travel	Mod +ve	Suitability of sites for affordable houses judged on accessibility to local services, facilities and public transport potentially reducing travel needs.
15. Deprivation	Mod +ve	Supports the delivery of housing to meet the needs of low income households and for those with special needs.
16. Housing	Maj +ve	Seeks to address objectively identified needs for market and affordable housing as well as provision of a range of housing sizes and types. Policy also provides for rural exceptions and for self-build and custom build properties. In particular, it seeks to address the needs of those seeking low cost market housing, affordable housing and housing in the rural area.

<i>Local</i>	6	<i>Unlikely</i>	0	<i>Direct</i>	7	<i>Positive</i>	7	Maj +ve	1
<i>Borough</i>	5	<i>Potential</i>	9	<i>Indirect</i>	4	<i>Negative</i>	4	Mod+ve	4
<i>Regional</i>	0	<i>Likely</i>	2	<i>Cumul</i>	0			Min+ve	2
<i>National</i>	0	<i>Definite</i>	0					Neutral	8
								Min-ve	4
								Mod-ve	0
								Maj -ve	0

The effects arising from the policy are on the whole anticipated to be long term (greater than 10 years or permanent), with five occurring at a borough-wide scale and six at a local scale. There are seven direct impacts and four indirect effects.

The policy performs well on the sustainable consumption and production theme with one potential direct, two potential indirect and one likely indirect beneficial outcome. The consequences for the climate change and energy theme are unclear as there is no direct reference to sustainable construction.

Delivery against the sustainable communities theme is strongly positive in terms of the effects on deprivation and housing, whereas the policy has no effect upon the achievement of objectives for designing out crime or providing for public safety.

5.5.2 Uncertainty

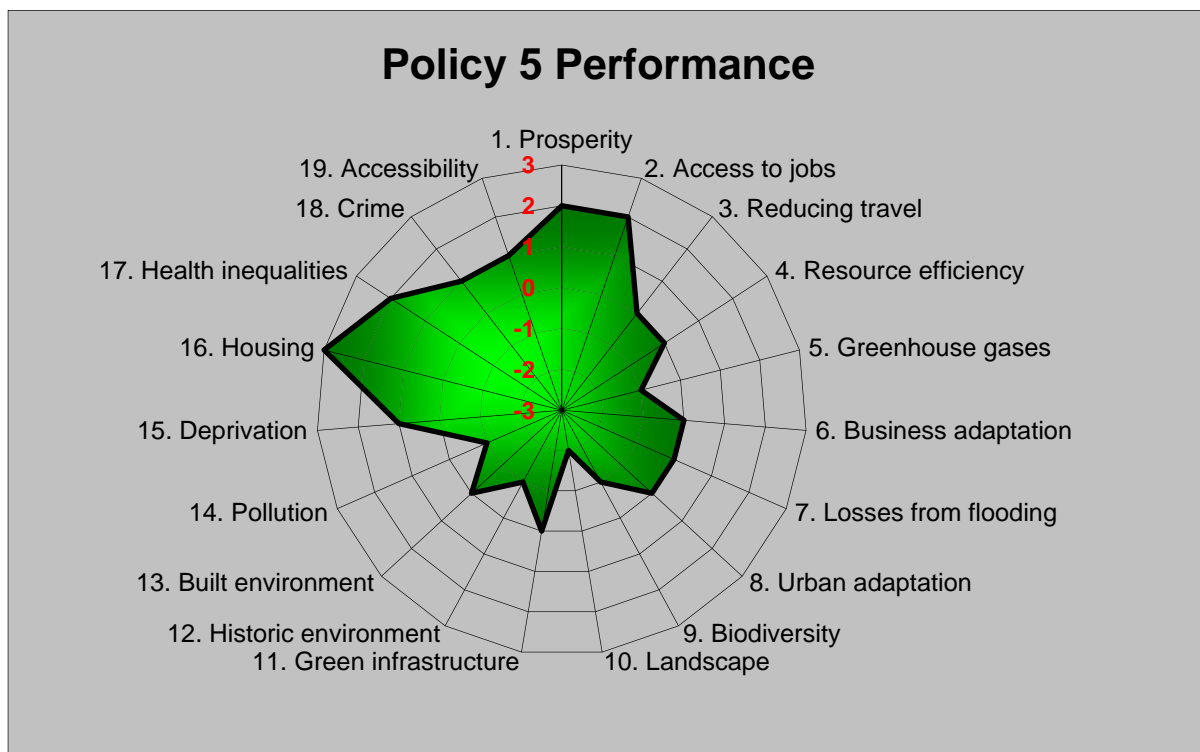
The uncertainty associated with the forecast outcomes varies across the sustainability appraisal framework. Two of the effects are considered to be likely to occur (one major positive, one moderate positive), and the rest are considered potential effects.

5.6 Appraisal of Policy 5: Provision of Land for Housing

5.6.1 Forecast Effects

The policy is envisaged to have the potential for a mostly positive outcome. There is one major, three moderate and three minor beneficial effects anticipated along with one moderate and four minor adverse effects. Eight of the twelve significant effects are judged to be direct with roughly equal local and Borough level outcomes (5 local, 7 borough). The forecast consequences of the policy upon the sustainability objectives are presented in Figure 5.7 below.

Figure 5.7. Sustainability Appraisal: Policy 5



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Mod +ve	The provision of housing in areas where access to employment, centres and a range of services is good will potentially assist people to locate closer to employment or have resources to travel to work. The level of growth proposed ought to support jobs in construction as well as providing the housing needed to meet economic aspirations.
2. Access to jobs	Mod +ve	Exceptional circumstances are needed to allow unidentified sites to proceed where accessibility to employment centres and a full range of services and facilities is poor across all settlements.

SA Objective	Likely Significance Effects	Rationale
10. Landscape	Mod -ve	The introduction of new houses and supporting infrastructure into the rural areas and settlement extensions is predicted to have a negative effect on existing landscape quality. Extensions to Balsall Common, Hampton in Arden, Knowle, or to the South of Solihull (between Majors Green and Cheswick Green) are likely to affect landscape character.
16. Housing	Maj +ve	The policy makes provision to allocate sufficient land for at least 6,522 net additional homes to ensure sufficient housing land supply to deliver 14,905 additional homes in the period 2014-2033. Under this scenario local needs would be met in full, as well as contributing approximately 2000 dwellings towards the wider unmet needs for the HMA. This ought to relieve pressure for housing somewhat from neighbouring Birmingham in particular.
17. Health inequalities	Mod +ve	Enhanced housing typically leads to health benefits. The strategy involves an element of housing in deprived areas, and also at accessible locations throughout the borough. Provided that housing is affordable and ensures a good mix of market and social rented homes / affordable homes, then inequalities ought to be tackled rather than compounded.

<i>Local</i>	5	<i>Unlikely</i>	0	<i>Direct</i>	8	<i>Positive</i>	7	Maj +ve	1
<i>Borough</i>	7	<i>Potential</i>	8	<i>Indirect</i>	3	<i>Negative</i>	5	Mod+ve	3
<i>Regional</i>	0	<i>Likely</i>	4	<i>Cumul</i>	1			Min+ve	3
<i>National</i>	0	<i>Definite</i>	0					Neutral	7
								Min-ve	4
								Mod-ve	1
								Maj -ve	0

The policy is predicted to have potentially moderate positive outcomes under the sustainable consumption and production theme. This relates to the positive effects recorded for prosperity and access to jobs. The majority of housing would be in areas where access to employment, centres and a range of services should be good. The level of growth proposed will also support jobs in construction as well as providing the housing needed to meet economic aspirations.

A substantial number of allocations are located at the edges of settlements on green field land and this is likely to mean that some communities are reliant on the use of the private car. However, for some developments, there may be potential for public transport enhancements assisting the wider network and existing communities. Overall, a neutral effect is forecast.

In terms of the climate change and energy sustainability theme, the policy is largely neutral in its effects, but the amount of growth generated is predicted likely to have a minor negative effect in terms of greenhouse gas emissions.

The housing strategy relies upon existing completions and commitments as well as windfall development. The remaining need of about 6000 dwellings has been distributed to largely greenfield (Green Belt) sites though, which presents the potential for negative effects on landscape character, biodiversity and green infrastructure. Conversely, development ought to offer opportunities to enhance green infrastructure, especially on strategic sites.

No provision is made in the policy to contribute towards green infrastructure or to consider the historic environment although these objectives may be delivered via the site development briefs and the application of other plan policies. Although biodiversity and landscape may also be affected with any site, hence policy 10 is in place to ensure mitigation and enhancement occurs.

A neutral outcome is predicted for the built environment objective as the policy states that new housing is to contribute towards maintaining local character and distinctiveness. This could help to enhance some parts of the Borough, but it should be acknowledged that in other areas, the character of settlements and urban fringe could be affected adversely. A detailed strategy for delivering green infrastructure networks on strategic sites would be beneficial, and help to mitigate these potential negative effects.

The sustainable communities theme is where the housing policy might be expected to deliver most of the beneficial outcomes. The policy provides one major beneficial outcome (housing), two potential minor beneficial outcomes (crime and deprivation) and one potential moderate positive outcome (health inequalities).

The overall effect on tackling social inclusion, deprivation and health inequalities ought to be positive given that the strategy focuses some housing development to areas of need. To ensure positive effects occur though, mixing of tenure should be promoted, with more affordable and social rented homes in non-deprived areas, and vice versa.

5.6.2 Uncertainty

Negative outcomes were predicted for five of the SA objectives. Of these, only one effect is 'likely' to occur, with four being 'potential effects'. This suggests that negative effects could potentially be mitigated through good design and strong application of other plan policies.

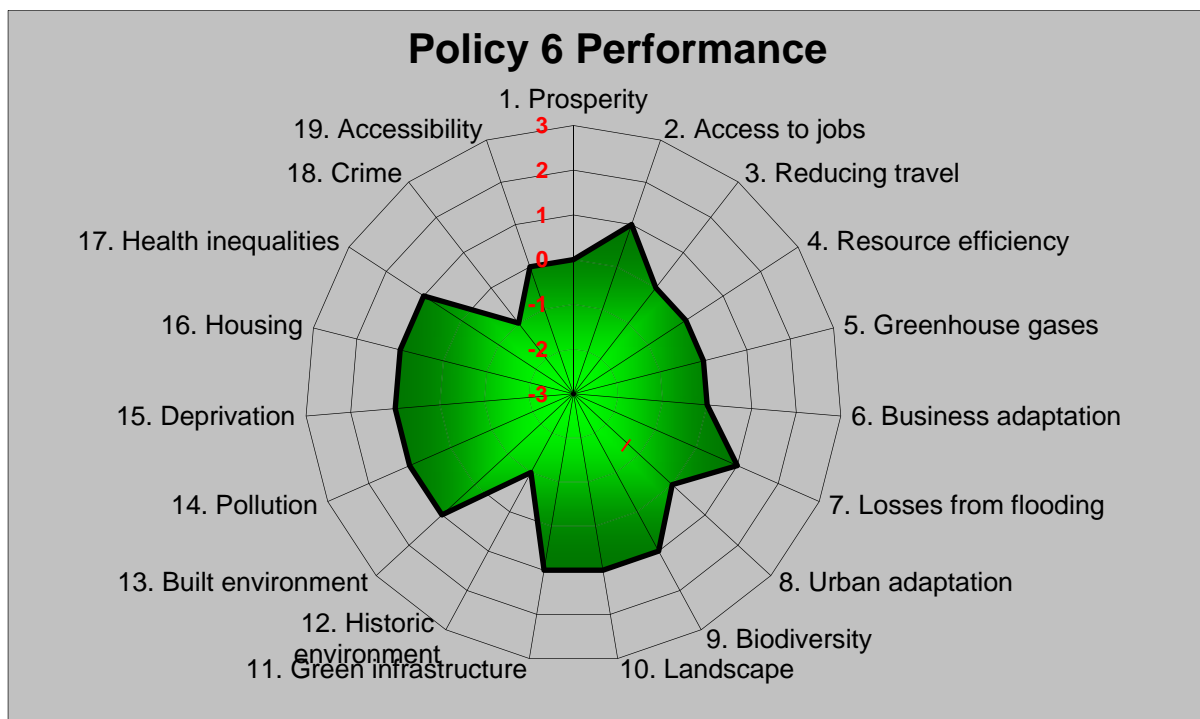
In terms of the positive effects, three are predicted to be likely, and four as having the 'potential' to occur. Hence there is some uncertainty in how the policy would perform in practice. It should be noted that the one major beneficial effect and two moderate positives were considered to be 'likely' outcomes (and so these significant effects are more certain).

5.7 Appraisal of Policy 6: Provision of Sites for Gypsies and Travellers

5.7.1 Forecast Effects

This policy was assessed as giving rise to ten minor positive, seven neutral and two minor negative significant effects (see Figure 5.8). Overall, this presents a positive picture across the SA framework. However, given the relatively small areas involved and their localised influence, effects of minor significance dominate.

Figure 5.8. Sustainability Appraisal: Policy 6



<i>Local</i>	12	<i>Unlikely</i>	0	<i>Direct</i>	7	<i>Positive</i>	10	Maj +ve	0
<i>Borough</i>	0	<i>Potential</i>	9	<i>Indirect</i>	5	<i>Negative</i>	2	Mod+ve	0
<i>Regional</i>	0	<i>Likely</i>	2	<i>Cumul</i>	0			Min+ve	10
<i>National</i>	0	<i>Definite</i>	1					Neutral	7
								Min-ve	2
								Mod-ve	0
								Maj -ve	0

All of the anticipated effects occur at a local-scale with 7 being direct effects and 5 indirect. The indirect effects focus upon effects upon the natural resource production and environmental enhancement theme and also on community deprivation. Typically there is a low level of certainty surrounding these effects.

5.7.2 Uncertainty

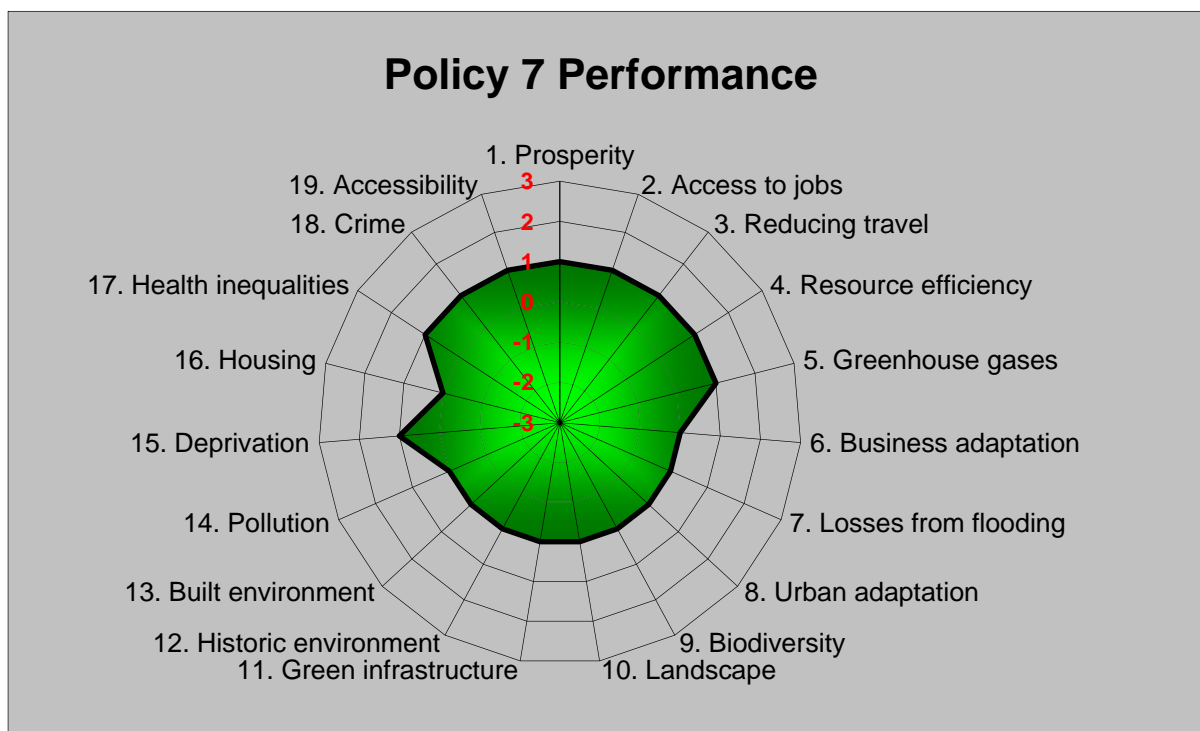
Nine of the significant effects are associated with 'potential' effects and only three outcomes are 'likely' or 'certain' to occur. Hence there is a degree of uncertainty over the effects likely to occur.

5.8 Appraisal of Policy 7: Accessibility and Ease of Access

5.8.1 Forecast Effects

This policy performs in a slightly positive manner with nine of the nineteen sustainability objectives reporting a minor beneficial outcome (see Figure 5.9) and the remainder scoring neutral. All of predicted effects are considered to be of a local scale reflecting the manner in which the accessibility criteria are applied to individual development sites.

Figure 5.1. Sustainability Appraisal: Policy 7



Local	9	Unlikely	0	Direct	2	Positive	9	Maj +ve	0
District	0	Potential	8	Indirect	6	Negative	0	Mod+ve	0
Regional	0	Likely	1	Cumul	1			Min+ve	9
National	0	Definite	0					Neutral	10
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

The majority of the effects associated with the sustainability objectives are indirect (six) occurring primarily under the sustainable consumption and production theme where minor positive outcomes are anticipated for prosperity, access to jobs, reduced travel and resource efficiency.

The policy supports development in the most accessible locations, and this is backed by a requirement to demonstrate that development will be within proximity to public transport. Where accessibility is poor, there could be potential for new routes to be established, especially as part of strategic development sites, and these opportunities should be explored and exploited to ensure that this policy has positive outcomes.

Improved accessibility for those reliant upon public transport may enhance access to employment and training and hence prosperity.

Should the policy be effective in promoting development in those areas with high levels of accessibility then there is a potential that this could contribute towards lowering greenhouse gas emissions. There

are no other outcomes envisaged for the climate change and energy or natural resource protection and environmental enhancement themes.

In terms of the sustainable communities theme, the policy focuses upon the location of development and also provides for the enhancement of other facilities or measures to improving accessibility. It is concluded that the sustainability outcomes of the policy are dependent upon local circumstances.

5.8.2 Managing Uncertainty

Eight of the nine outcomes were viewed as having the potential to occur. This uncertainty results from the focus of the policy upon the location of development which represents only part of the equation in causing behavioural change that improved accessibility and ease of access could deliver.

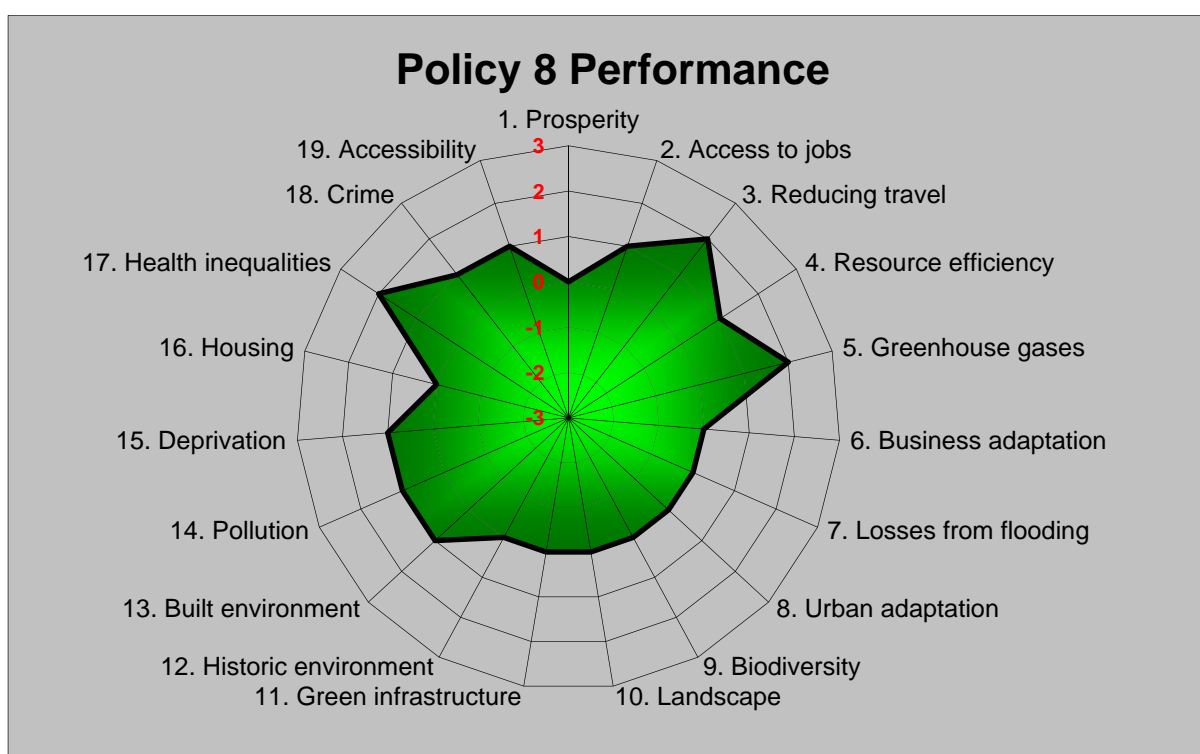
5.9 Appraisal of Policy 8: Managing Travel Demand and Reducing Congestion

5.9.1 Forecast Effects

Tackling both transport demand and congestion gives rise to three potential moderate positive outcomes (reducing the need to travel, greenhouse gases and health inequalities) although this is tempered by the policies requirement to have regard to improved transport efficiency and safety which contrasts with the need to promote and encourage sustainable modes.

The other impacts are either neutral or minor positive (see Figure 5.10) and localised in their geographic extent with typically impacts having a three-to-ten year duration. The five direct benefits are associated with access to jobs; Reducing travel; Resource efficiency, Built environment and Crime.

Figure 5.10. Sustainability Appraisal: Policy 8



SA Objective	Likely Significance Effects	Rationale
3. Reducing travel	Mod +ve	The policy encourages proposals which are located to reduce the need to travel and manage the amount of parking provided.
5. Greenhouse gases	Mod +ve	The policy has the potential to reduce greenhouse emissions through the reduction in travel and use of more sustainable modes of transport.
17. Health Inequalities	Mod +ve	Improved access to work and services has the potential to reduce health inequalities. Development of public transport network, walking and cycling will help to improve access, particularly from deprived areas.

<i>Local</i>	8	<i>Unlikely</i>	0	<i>Direct</i>	5	<i>Positive</i>	10	Maj +ve	0
<i>Borough</i>	2	<i>Potential</i>	10	<i>Indirect</i>	3	<i>Negative</i>	0	Mod+ve	3
<i>Regional</i>	0	<i>Likely</i>	0	<i>Cumul</i>	2			Min+ve	7
<i>National</i>	0	<i>Definite</i>	0					Neutral	9
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

In terms of the sustainable consumption and production theme, the policy makes reference to reducing the need to travel and providing sustainable transport in addition to the private car. There is also a requirement for transport assessments and/or travel plans for proposals generating “significant” traffic volumes, which should help to ensure that there are no significant effects on the road network that could affect accessibility.

5.9.2 Uncertainty

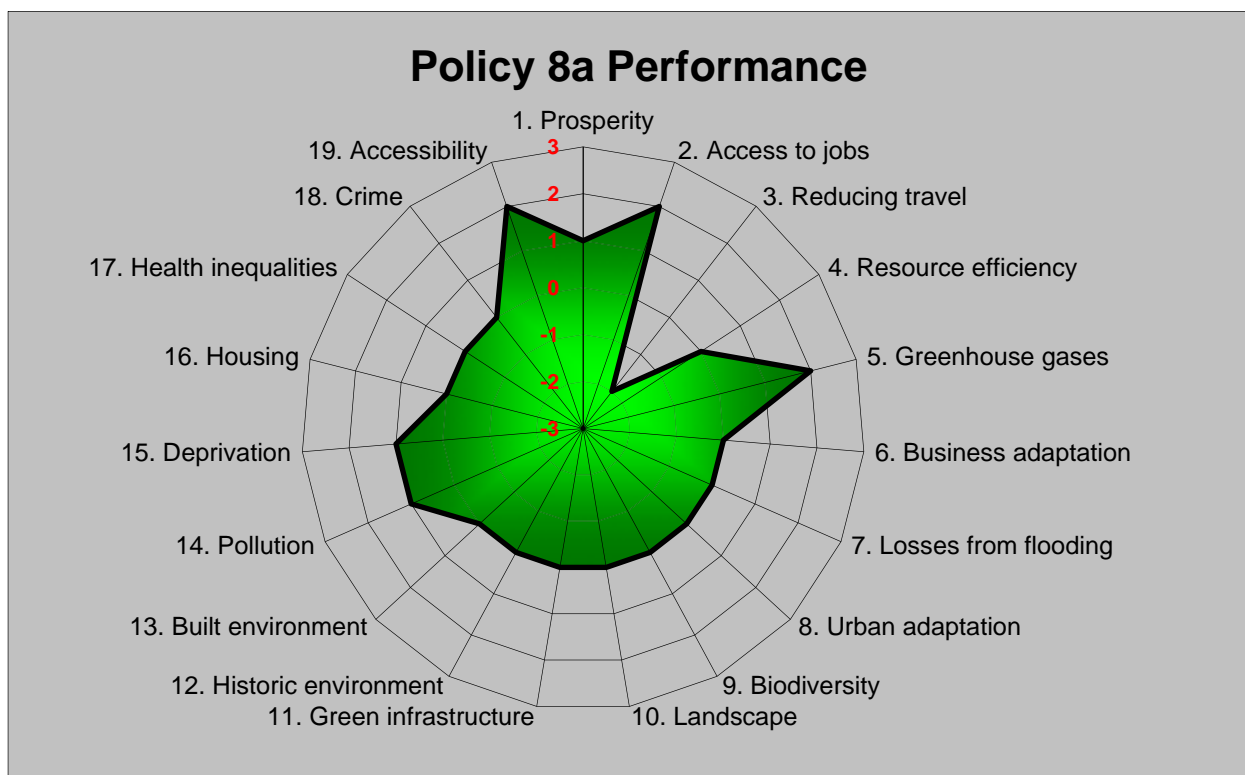
The significant outcomes across the sustainable communities theme are a mixture of direct, cumulative and indirect minor beneficial outcomes being dependent upon local circumstances for delivery. All of the beneficial effects are considered to be ‘potential’ outcomes, so monitoring of effects should be undertaken to ensure that positives are achieved.

5.10 Appraisal of Policy 8a: Rapid Transit

5.10.1 Forecast Effects

In the main, there are mainly neutral effects, with twelve being predicted. However, the policy is likely to be beneficial with regards to six SA Objectives (access to jobs, accessibility in general and greenhouse gas reduction all having moderate positive effects). There is considered to be one moderate negative effect on reducing travel as the provision of a rapid transit network is likely to increase the distances people travel. There is potential for the development of the rapid transit system to create new nodal points for commuters, who may travel from outside the Borough in order to gain access to these links into key sites such as UK Central. In this sense, the distance travelled may increase. More likely, however, the delivery of a rapid-transit network will help to reduce reliance on the private car, and have a positive effect on the release of greenhouse gas emissions.

Figure 5.2. Sustainability Appraisal: Policy 8a



SA Objective	Likely Significance of Effects	Rationale
2. Access to jobs	Mod +ve	The provision of a rapid transit network will increase the accessibility of employment centres
3. Reducing travel	Mod -ve	The provision of a rapid transit network is likely to increase the distances people travel.
5. Greenhouse gases	Mod +ve	The rapid transit networks are likely to reduce congestion and therefore reduce greenhouse gases. There is a risk that the network will encourage greater volumes and distances of travel, leading to increased GHG emissions
17. Accessibility	Mod +ve	Rapid transport should help to improve accessibility both within and outside the Borough.

<i>Local</i>	3	<i>Unlikely</i>	0	<i>Direct</i>	4	<i>Positive</i>	6	Maj +ve	0
<i>Borough</i>	3	<i>Potential</i>	4	<i>Indirect</i>	3	<i>Negative</i>	1	Mod+ve	3
<i>Regional</i>	1	<i>Likely</i>	3	<i>Cumul</i>	0			Min+ve	3
<i>National</i>	0	<i>Definite</i>	0					Neutral	12
								Min-ve	0
								Mod-ve	1
								Maj -ve	0

5.10.2 Uncertainty

The certainty of four outcomes is considered to be 'potential'. This relates to the extent to which rapid transport will support wider regeneration and improved prosperity (positive effects).

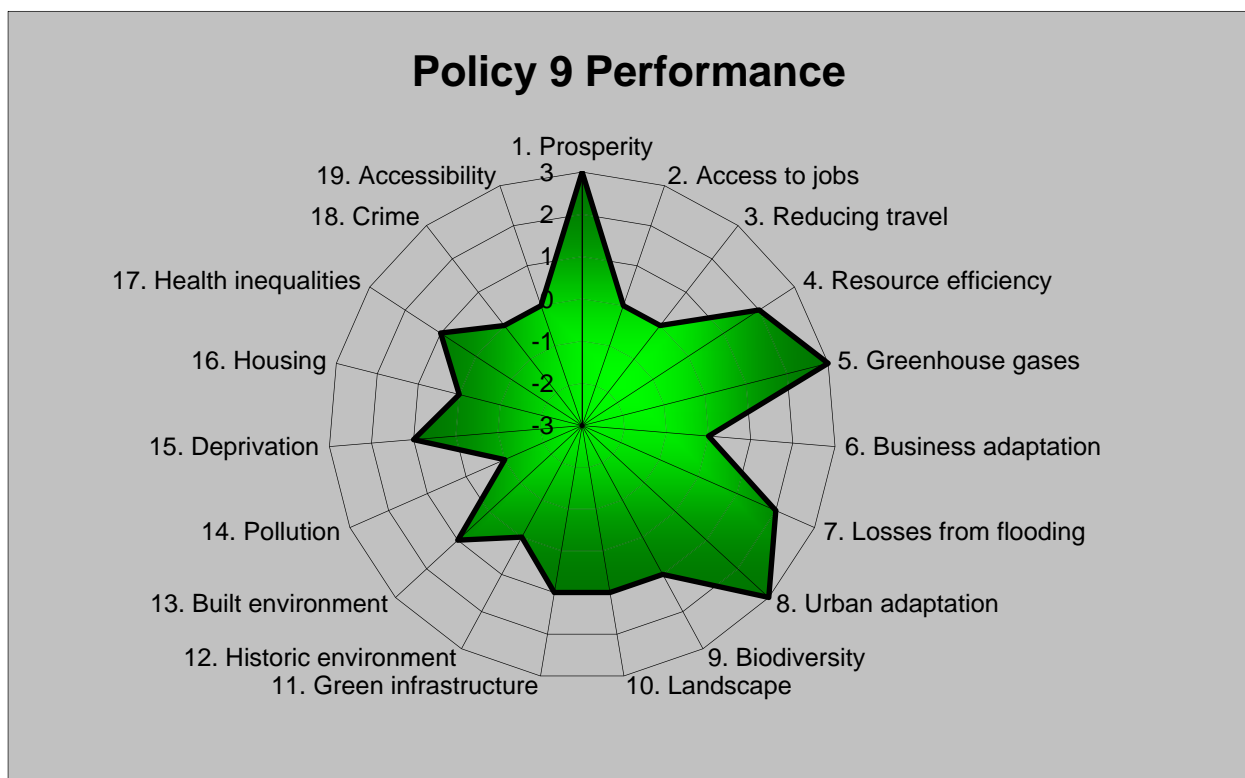
There is also some uncertainty about the influence the policy could have on travel behaviours, and so greenhouse gas emissions may be lower or higher than 'moderate'. Monitoring of travel patterns and emissions from transport is necessary to determine the extent of effects.

5.11 Appraisal of Policy 9: Mitigating and Adapting to Climate Change

5.11.1 Forecast Effects

This policy performs in a positive manner with eleven of the nineteen sustainability objectives reporting an effect of beneficial significance. Of these, three are major positives and two are moderate positives as illustrated in Figure 5.12. A further seven effects are predicted to be neutral. The policy potentially risks a contribution towards a minor negative effect upon pollution due to possible air/odour effects associated with certain renewable energy systems (e.g. biomass).

Figure 5.3. Sustainability Appraisal: Policy 9



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Maj +ve	This policy identifies Solihull Town Centre and the UKC Hub Area as locations where district energy and heating networks will be encouraged. It also promotes the establishment of Renewable Energy Service Companies. The savings being made by residents should help offset increasing energy costs and thereby aid prosperity as well as securing employment in the energy market.
4. Resource efficiency	Mod +ve	The policy ought to lead to the more efficient use of energy particularly within new homes and potentially in existing homes via distributed heat networks.
5. Greenhouse gases	Maj +ve	The minimisation of greenhouse gas emissions is a key focus of this policy, although no minimum standards have been set
7. Losses from flooding	Mod +ve	The policy promotes the inclusion of flood prevention and mitigation measures, including (SUDS) and water efficiency measures in development proposals
8. Urban adaptation	Maj +ve	Developers are to ensure resilience in the development to the impacts of climate change through a range of measures.

<i>Local</i>	7	<i>Unlikely</i>	0	<i>Direct</i>	7	<i>Positive</i>	11	Maj +ve	3
<i>Borough</i>	5	<i>Potential</i>	6	<i>Indirect</i>	3	<i>Negative</i>	1	Mod+ve	2
<i>Regional</i>	0	<i>Likely</i>	4	<i>Cumul</i>	2			Min+ve	6
<i>National</i>	0	<i>Definite</i>	2					Neutral	7
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

The policy does not address directly the role that water conservation plays in the reduction in carbon emissions, although this could be addressed through housing site development briefs.

The effects arising from the policy are anticipated to be mostly long term (greater than 10 years or 3-10 years).

A total of three indirect effects are anticipated, related to the potential for consequences upon the natural resource protection and environmental enhancement theme and the health inequalities sustainability objective. These consequences are indirect since they are a product of how the policy is complied with on individual projects rather than due to the policy itself.

There are seven direct and two cumulative effects anticipated. The direct effects are associated with the prosperity, resource efficiency, urban adaptation, landscape, green infrastructure, built environment and deprivation.

In terms of the sustainable consumption and production theme, the policy is envisaged to be likely to give rise to a major beneficial outcome focusing energy and heat networks in areas where benefits to businesses and local communities may provide energy savings and where schemes are likely to be feasible. The policy is envisaged to give rise to moderate beneficial outcome for resource efficiency.

Being focused upon climate change, the policy is expected to deliver reductions in greenhouse gas emissions and also aid urban adaptation, in both cases resulting in major beneficial outcomes.

In terms of the effect of the policy upon the natural resource protection & environment theme, four of the outcomes are judged to be minor positive with one minor negative (pollution) and one neutral (historic environment).

The policy, alongside the 2016 Building Regulations, is expected to contribute to reduced emissions and enhanced adaptation to the effects of climate change. The policy is anticipated to either definitely or likely to contribute towards five sustainability objectives, four of which are assessed as being moderate beneficial with one being minor beneficial.

5.11.2 Uncertainty

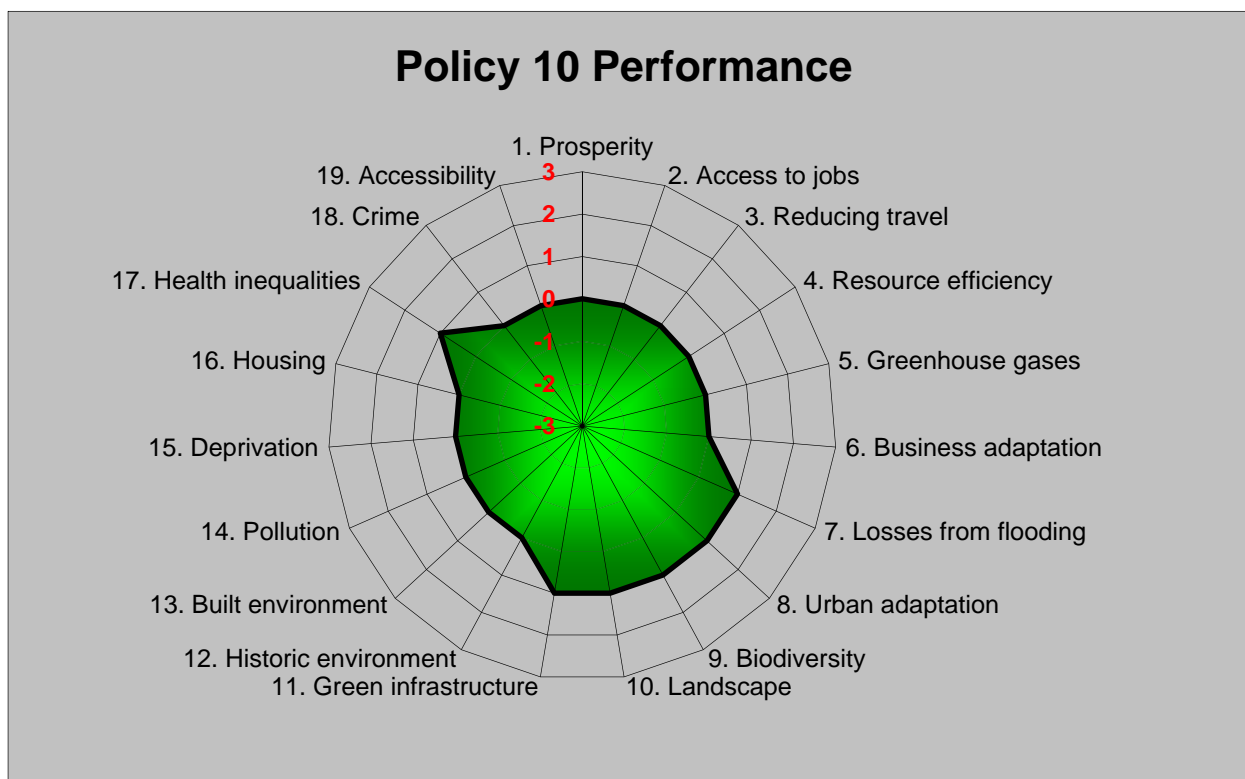
A total of six potential outcomes are anticipated across the climate change and energy, natural resource protection and sustainable communities themes. The judgement that the policy results in these potential outcomes is a reflection of the fact that the consequences upon biodiversity, green infrastructure, pollution, deprivation and health inequalities sustainability objectives can only be determined at a project level when the specific circumstances that dictate the outcome are known.

5.12 Appraisal of Policy 10: Natural Environment

5.12.1 Forecast Effects

This policy is slightly beneficial as there are six minor positive outcomes across the climate change and energy, natural resource protection and the sustainable communities themes. (See Figure 5.13). These effects are all local in their geographical influence, with three being definite and three being likely. All other objectives report neutral outcomes.

Figure 5.4. Sustainability Appraisal: Policy 10



<i>Local</i>	6	<i>Unlikely</i>	0	<i>Direct</i>	4	<i>Positive</i>	6	Maj +ve	0
<i>Borough</i>	0	<i>Potential</i>	3	<i>Indirect</i>	2	<i>Negative</i>	0	Mod+ve	0
<i>Regional</i>	0	<i>Likely</i>	3	<i>Cumul</i>	0			Min+ve	6
<i>National</i>	0	<i>Definite</i>	0					Neutral	13
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

The policy does not perform as highly as it might since its positive intentions are predicated upon development occurring that causes a need for mitigation measures. Thus the benefits are traded for losses caused by development proposals. It is not clear whether the clause “Where development is permitted, appropriate mitigation of the impacts and compensation where relevant will be required to deliver a net gain in biodiversity, landscape character and local distinctiveness” applies to any development not having an effect upon a designated site.

5.12.2 Uncertainty

Of the six beneficial effects three are considered to result in a ‘likely’ outcomes; the others having the ‘potential’ to deliver a beneficial outcome. Therefore, there is a degree of certainty about this policy having a positive effect.

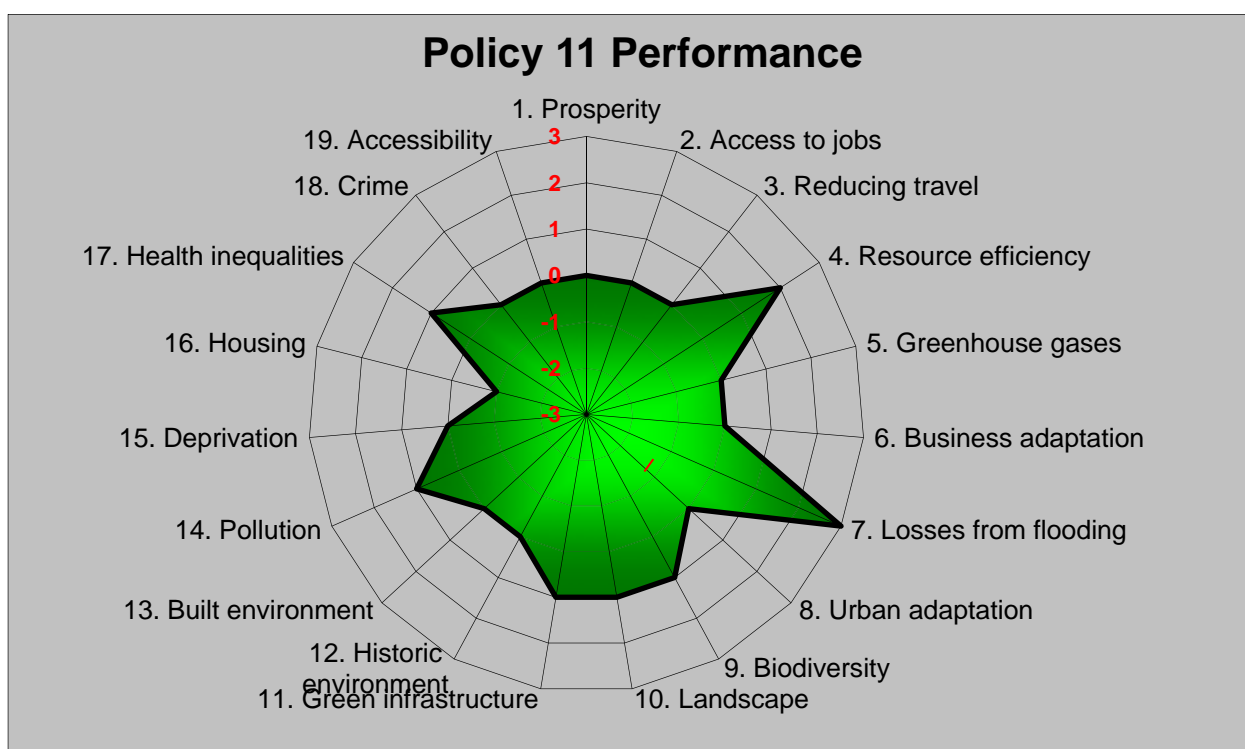
5.13 Appraisal of Policy 11: Water Management

5.13.1 Forecast Effects

The majority of effects are predicted to be neutral, with eleven of the nineteen objectives unlikely to experience a significant outcome. Only one minor adverse effect is predicted on housing, related to the setting aside of land for water. This could potentially reduce the amount of development on sites and hence may adversely affect the viability or amount of housing that can be delivered. However, it should be acknowledged that mitigation could be secured such as higher density development and SUDs.

It is predicted that this policy would also make a positive contribution towards some of sustainability objectives; delivering one major beneficial (losses from flooding) one moderate beneficial outcome (resource efficiency) and a further five outcomes that are minor beneficial for environmental objectives (see Figure 5.14).

Figure 5.5. Sustainability Appraisal: Policy 11



SA Objective	Likely Significance Effects	Rationale
4. Resource efficiency	Mod +ve	Developers are required to demonstrate the highest possible standards of water efficiency including recycling of potable, grey water and rainwater.
7. Losses from flooding	Maj +ve	The policy focuses upon sustainable urban drainage, controls on runoff rates, requires that site with the lowest risk of flooding where no alternatives exist will only be considered when safety measures are taken and measures to reduce flood risk on site and elsewhere are in place and applications are accompanied by a site specific flood risk assessment.

<i>Local</i>	6	<i>Unlikely</i>	0	<i>Direct</i>	6	<i>Positive</i>	7	Maj +ve	1
<i>Borough</i>	2	<i>Potential</i>	2	<i>Indirect</i>	1	<i>Negative</i>	1	Mod+ve	1
<i>Regional</i>	0	<i>Likely</i>	3	<i>Cumul</i>	1			Min+ve	5
<i>National</i>	0	<i>Definite</i>	3					Neutral	11
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

The policy is envisaged to give rise to only one outcome for the sustainable consumption and production theme with a likely moderate beneficial outcome on resource efficiency.

A major beneficial outcome for flooding is the only outcome anticipated under the climate change and energy theme.

Four minor positive outcomes are likely to arise under the natural resource protection theme (biodiversity, landscape, green infrastructure and pollution).

Within the sustainable communities theme there is a potential minor positive outcome for health inequalities due to the integration of amenity and recreational elements within the sustainable urban drainage measures. A potential minor negative outcome is anticipated for housing, reflecting the potential change to hydrology as a result of development on greenfield land.

5.13.2 Uncertainty

Of the seven beneficial outcomes all but one are considered to be 'likely' or 'definite' outcomes. The only potential beneficial outcome is that of health inequalities. It is judged that the integration of amenity and recreational elements within sustainable urban drainage schemes have the potential to provide some opportunities to reduce health inequalities where disadvantaged communities are served by the schemes.

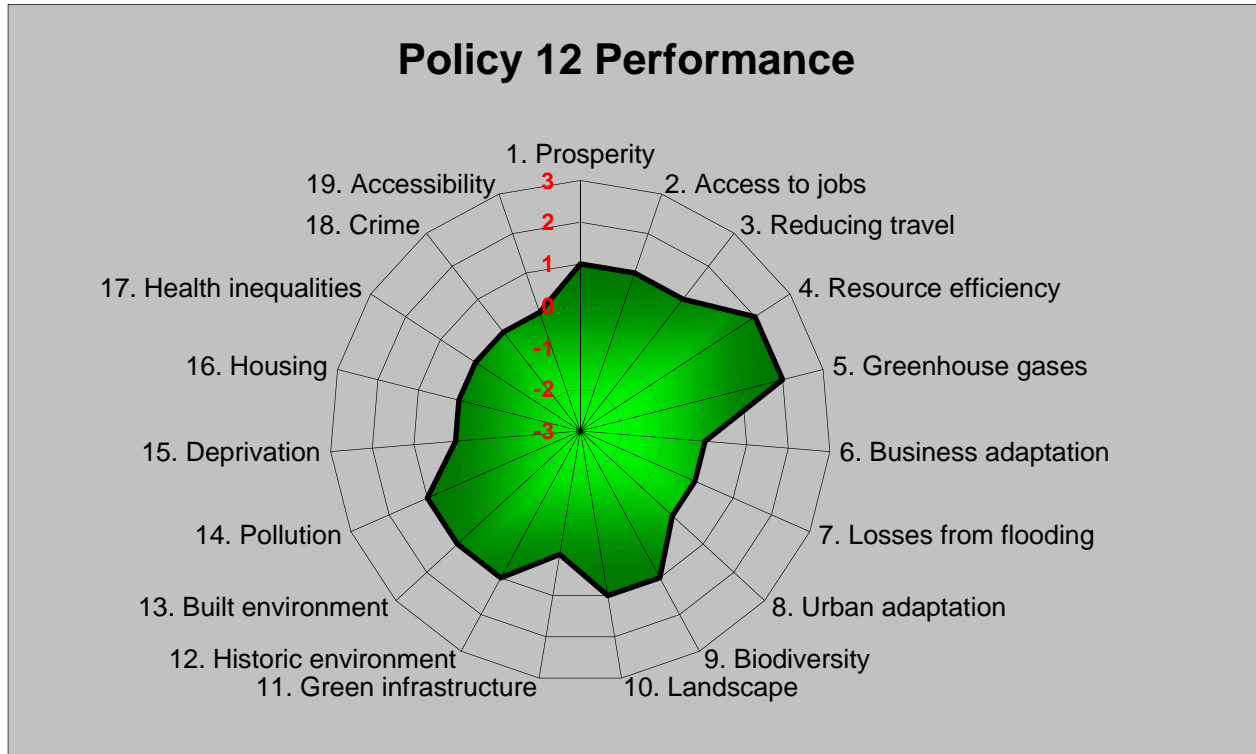
5.14 Appraisal of Policy 12: Resource Management

5.14.1 Forecast Effects

This policy is predicted to give rise to two moderate beneficial outcomes (resource efficiency and greenhouse gases) and delivers eight minor beneficial outcomes. The remaining nine outcomes are considered to be neutral (see Figure 5.15).

No adverse effects are predicted. Principally by being explicit on the criteria for the location of waste management activities the potential for adverse effects has been managed.

Figure 5.6. Sustainability Appraisal: Policy 12



SA Objective	Likely Significance Effects	Rationale
4. Resource efficiency	Mod +ve	By encouraging the prevention of waste and then to enable the recovery of value high up the waste hierarchy this policy is likely to deliver improved resource efficiency. Non-waste development will also be required to provide facilities that deliver satisfactory provision for waste management.
5. Greenhouse gases	Mod +ve	Reducing the transport of waste as well as a requirement upon waste operators to demonstrate minimised greenhouse gas emissions from their operations is likely to lead to reduced emissions. Further by minimising waste to landfill has the potential exists to reduce methane released from landfills.

<i>Local</i>	8	<i>Unlikely</i>	0	<i>Direct</i>	10	<i>Positive</i>	10	Maj +ve	0
<i>Borough</i>	2	<i>Potential</i>	7	<i>Indirect</i>	0	<i>Negative</i>	0	Mod+ve	2
<i>Regional</i>	0	<i>Likely</i>	3	<i>Cumul</i>	0			Min+ve	8
<i>National</i>	0	<i>Definite</i>	0					Neutral	9
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

Within the sustainable consumption and production theme, the policy gives rise to positive outcomes across the four sustainability objectives. The prosperity, access to jobs outcomes are anticipated to be potential minor positive, while the outcomes upon reducing travel and resource efficiency are more certain generating a moderate beneficial outcome (resource efficiency) and a minor positive (reducing travel).

The policy has the potential to deliver a moderate beneficial outcome for the climate change and energy theme and the potential for three minor beneficial outcomes within the natural resource protection theme.

5.14.2 Uncertainty

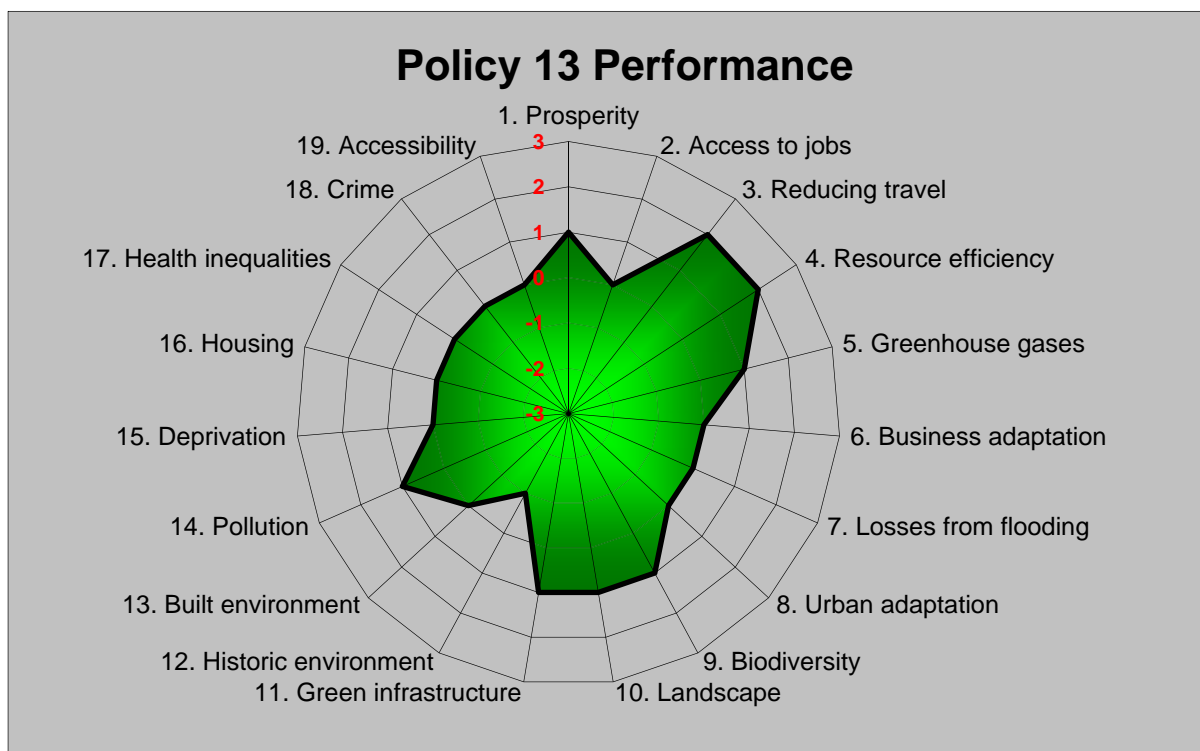
Of the ten beneficial outcomes against the sustainability objectives that this policy delivers, seven are considered to have the potential to occur with four being likely or a definite outcome (reducing travel; resource efficiency, built environment and public safety). The potentially beneficial outcomes for greenhouse gases and natural resource protection are driven by a requirement for the Council to give consideration to the effects of waste management proposals upon these sustainability objectives. As such beneficial outcomes are more likely but are not certain being determined at a project level.

5.15 Appraisal of Policy 13: Minerals

5.15.1 Forecast Effects

This policy has mostly neutral effects (ten) but gives rise to two moderate positive outcomes (reducing transport and resource efficiency) along with six minor positive outcomes. There is only one minor negative outcome (see Figure 5.16). The opportunity to convert the array of minor positive outcomes to moderate beneficial is constrained by the geographic scale of the effects being essentially local rather than across the Borough.

Figure 5.7. Sustainability Appraisal: Policy 13



SA Objective	Likely Significance Effects	Rationale
3. Reducing travel	Mod +ve	Local production minimises the import of materials from elsewhere with consequential savings in transport that potentially benefit the entire Borough. The policy also encourages the co-location of recycling facilities and ancillary uses that may also contribute towards reducing travel.
4. Resource efficiency	Mod +ve	Protects mineral resource from sterilisation, promotes the use of secondary aggregates and recycling of resources with efficiencies to emerge from the co-location of operations.

Local	7	Unlikely	0	Direct	8	Positive	8	Maj +ve	0
Borough	2	Potential	5	Indirect	0	Negative	1	Mod+ve	2
Regional	0	Likely	0	Cumul	1			Min+ve	6
National	0	Definite	4					Neutral	10
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

The policy has the potential to deliver positive outcomes across three of the four objectives under the sustainable consumption and production theme. While the moderate positive outcome on resource efficiency is considered to be a definite outcome, the minor positive outcome upon prosperity and the moderate beneficial outcome on reducing travel are both considered to be potential outcomes.

There is a possibility that the policy could give rise to a minor beneficial outcome for greenhouse gases under the climate change theme, whereas there are five minor beneficial and one minor adverse outcome for the historic environment under the natural resource protection theme. The minor negative outcome for the historic environment objective is as a result of the policy providing for the “assessment” of effects upon the historic environment rather than the delivery of a positive outcome. This could be mitigated by amending the policy to ensure that development does not have a significant negative effect upon heritage assets and their setting.

No significant outcomes are anticipated against the sustainable communities theme.

5.15.2 Uncertainty

Of the nine significant effects identified for the policy against the sustainability framework, there are four definite beneficial outcomes (resource efficiency, biodiversity, consideration of landscape and the minimisation of pollution risks). The remaining outcomes are all considered to give rise to potential direct effects.

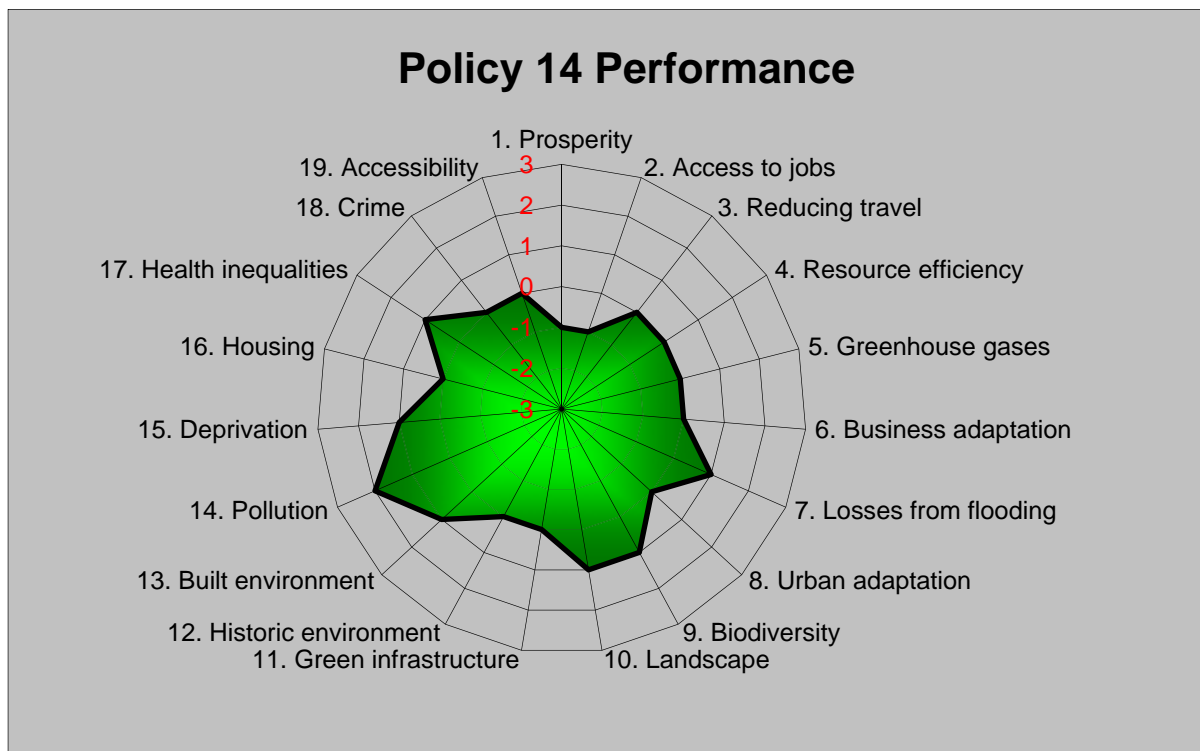
5.16 Appraisal of Policy 14: Amenity

5.16.1 Forecast Effects

This policy gives rise to one moderate positive outcome for pollution, along with six minor positive outcomes, and two minor negative outcomes (see Figure 5.17). The opportunity to convert the array of minor positive outcomes to moderate beneficial is constrained by the geographic scale of the effects being essentially local rather than across the Borough.

Only one effect is considered to be likely to be Borough-wide and is identified as being likely to give rise to a moderate beneficial outcome.

Figure 5.8. Sustainability Appraisal: Policy 14



SA Objective	Likely Significance Effects	Rationale
14. Pollution	Mod +ve	Policy provides for protection of tranquil areas, protection from light pollution, controls on noise generating development and air quality.

<i>Local</i>	8	<i>Unlikely</i>	0	<i>Direct</i>	3	<i>Positive</i>	7	Maj +ve	0
<i>Borough</i>	1	<i>Potential</i>	7	<i>Indirect</i>	6	<i>Negative</i>	2	Mod+ve	1
<i>Regional</i>	0	<i>Likely</i>	2	<i>Cumul</i>	0			Min+ve	6
<i>National</i>	0	<i>Definite</i>	0					Neutral	10
								Min-ve	2
								Mod-ve	0
								Maj -ve	0

In the context of the sustainable consumption and production theme, the policy is considered to have the potential to constrain employment opportunities by permitting development only if it protects and enhances the amenity of existing and proposed occupiers. The policy does however provide support for high speed broadband which is a positive effect.

Within the climate change and energy theme, the policy is anticipated to give rise to one potential minor beneficial outcome on flooding.

Across the six objectives within the natural resource protection & environment theme, the policy provides three potential minor beneficial outcomes (biodiversity, landscape, and built environment). The Policy no longer explicitly references green infrastructure, or landscape, however it does reference the safeguarding of trees, hedgerows and woodland which will contribute to the landscape. The adoption of a low emission zone should also contribute towards reducing pollution (hence a moderate beneficial outcome is likely).

Only two objectives within the sustainable communities theme deliver potential minor beneficial outcomes (deprivation and health inequalities). Support for broadband may assist in access improvements to employment, education and health services and potentially reduce imbalances across the Borough. Also, the potential low emission zone as well as improved broadband may contribute towards reducing health inequalities particularly for those living in areas of high traffic volume.

Most of the outcomes from the policy are judged to be indirect and local reflecting the policy itself typically in the short to medium term duration.

5.16.2 Uncertainty

Of the nine significant effects identified for the policy against the sustainability framework, only two generate likely outcomes (consideration of built environment and the minimisation of pollution risks). The remaining outcomes are all considered to give rise to potential effects although the potential effects within the sustainable consumption and production, sustainable communities, as well as the climate change and energy themes are considered to be indirect effects.

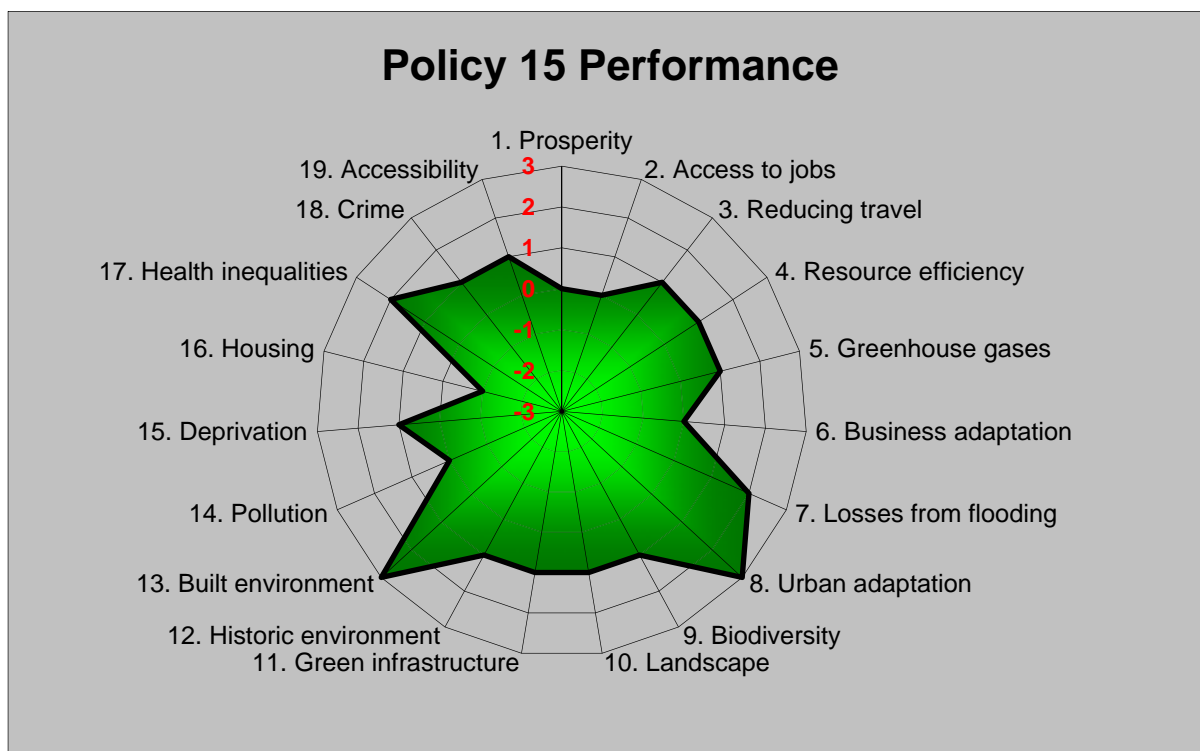
5.17 Appraisal of Policy 15: Securing Design Quality

5.17.1 Forecast Effects

The policy performs in a positive manner across fourteen of the nineteen sustainability objectives. As can be seen from Figure 5.18 there are two major beneficial outcomes, two moderate beneficial and ten minor positive outcomes.

The one minor adverse outcome arises from a potential for high design standards to adversely affect the viability of some development projects such that there could be some negative effects upon prosperity and housing.

Figure 5.9. Sustainability Appraisal: Policy 15



SA Objective	Likely Significance Effects	Rationale
7. Losses from flooding	Mod +ve	Adherence to urban design principles and guidance as well as green infrastructure should contribute towards reducing losses from flooding
8. Urban adaptation	Maj +ve	Highest possible standards of environmental performance including design, construction, location and layout, the policy also encourages proposals to be proactive in responding to climate change, using low carbon construction principles in terms of their design, layout and density, meeting the requirements of Approved Document M of the Building Regulations, or subsequent equivalent.
13. Built environment	Maj +ve	This policy seeks to maximise delivery of a quality built environment across the Borough.
17. Health inequalities	Mod +ve	With measures across the Borough, enhanced design and the creation of accessible public spaces with reduced crime, each cumulatively is likely to contribute towards helping to meet the needs of the elderly population and promote healthy lifestyles.

<i>Local</i>	11	<i>Unlikely</i>	0	<i>Direct</i>	8	<i>Positive</i>	14	Maj +ve	2
<i>Borough</i>	4	<i>Potential</i>	4	<i>Indirect</i>	3	<i>Negative</i>	1	Mod+ve	2
<i>Regional</i>	0	<i>Likely</i>	9	<i>Cumul</i>	4			Min+ve	10
<i>National</i>	0	<i>Definite</i>	2					Neutral	4
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

In terms of the outcomes against the four sustainable consumption and production themes, two minor positive outcomes are likely (reducing travel and resource efficiency), with only one potential minor negative outcome (housing). This potential outcome on the viability of development could affect the amount of housing that can be delivered, as well as its affordability. One major positive outcome is likely (urban adaptation) within the climate change and energy theme. This is accompanied by a potential moderate positive (flooding) and likely minor positive outcome (greenhouse gas emissions).

Four of the six natural resource protection objectives record likely minor positive outcomes (biodiversity, landscape, green infrastructure and the historic environment). While the policy records a neutral outcome against the pollution objective, it delivers a definite major positive outcome for the built environment.

The policy seeks to deliver high quality design across the Borough. This could add to investment costs and potentially act as a barrier in the short term, especially on sites that are more difficult to bring forward. Conversely, high quality design will lead to more attractive developments that ought to be beneficial to the economy in the longer term. Overall, a neutral effect is predicted.

The issue of short term needs and longer term aspirations for sustainable well-designed developments is also a consideration in balancing the potential implications of the policy upon the prosperity, deprivation, crime and housing sustainability objectives.

The outcomes from this policy are envisaged to last for over 10 years and extend over the major duration of the Core Strategy and beyond. Some of the outcomes are more likely to occur over the short to medium term (3-10 years) basically being affected by the uncertainties associated with how the sustainable communities' objectives may perform as a result of wider economic trends.

As noted above, while eight of the outcomes are considered to be a direct consequence of the policy, seven are considered to be either cumulative or indirect in nature. The cumulative effects arise for the resource efficiency, greenhouse gases, losses from flooding, built environment and health inequalities objectives.

5.17.2 Uncertainty

Of the fifteen forecasted outcomes, eleven are considered to be 'likely' or 'definite' outcomes. There are three minor positive and one minor negative outcomes for which uncertainty exists. The Supplementary Planning Documents could increase the certainty that beneficial outcomes can result from the policy.

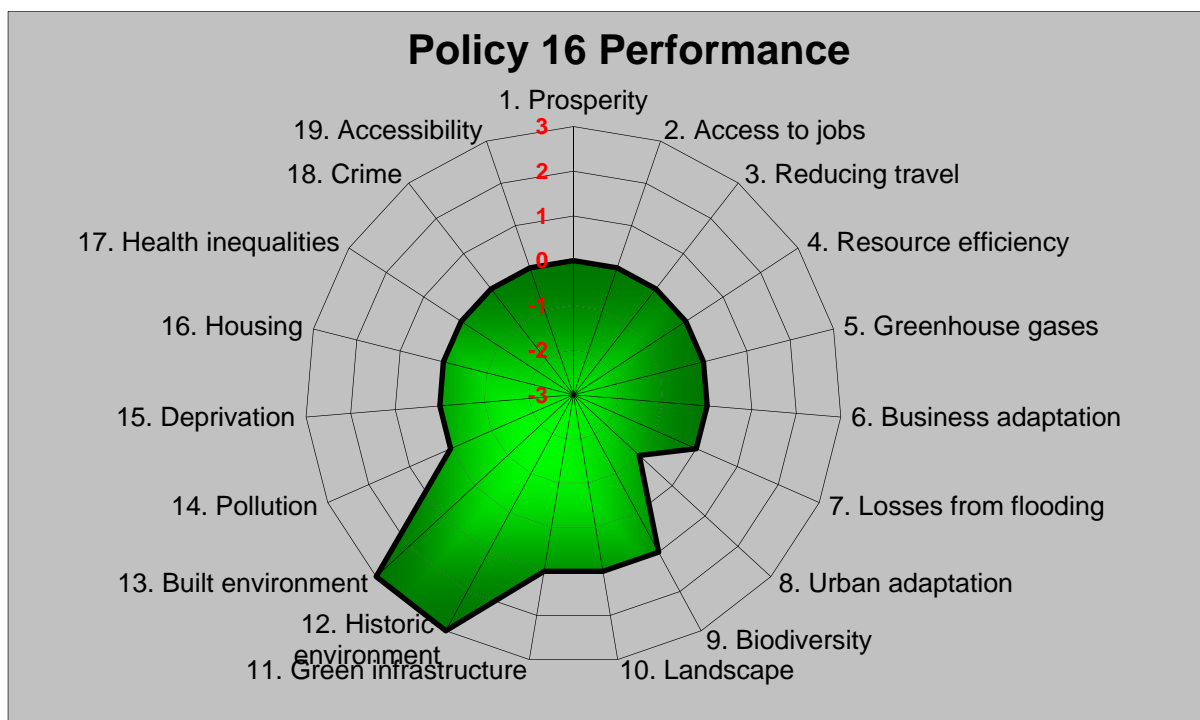
5.18 Appraisal of Policy 16: Conservation of Heritage Assets and Local Distinctiveness

5.18.1 Forecast Effects

This policy largely results in neutral effects upon the sustainability framework (thirteen neutral objectives), however it does give rise to two major beneficial (historic environment and built environment), three minor beneficial outcomes and one minor adverse outcome.

Not surprisingly the impacts of the policy occur within the natural resource protection and environmental enhancement theme although there is a potential minor adverse effect upon urban adaptation (see Figure 5.19).

Figure 5.10. Sustainability Appraisal: Policy 16



SA Objective	Likely Significance Effects	Rationale
12. Historic environment	Maj +ve	Recognises different historic environment resources and their role in delivery of local distinctiveness. Makes reference to the implications of mitigation.
13. Built environment	Maj +ve	Likely to enhance local distinctiveness and identity.

Local	4	Unlikely	0	Direct	3	Positive	5	Maj +ve	2
Borough	2	Potential	3	Indirect	0	Negative	1	Mod+ve	0
Regional	0	Likely	0	Cumul	3			Min+ve	3
National	0	Definite	3					Neutral	13
								Min-ve	1
								Mod-ve	0
								Maj -ve	0

The policy delivers positive outcomes across the natural resource protection and sustainable communities themes with one minor adverse outcome anticipated for the climate change theme and only neutral outcomes anticipated for the sustainable consumption theme. This is because the policy expects adaptation measures to be sympathetic to the heritage asset, which could reduce climate change mitigation potential. However, it is possible to sensitively incorporate renewable energy technologies into developments without adversely affecting character,

Under the natural resource protection theme, there are two definite major positive outcomes (Historic and built environment) with three minor positive outcomes (biodiversity, landscape, green infrastructure) two of which have potential cumulative outcomes.

The effects of the policy are mainly anticipated to occur over the longer term and generally a result of the cumulative effects of individual change resulting from the policy.

5.18.2 Uncertainty

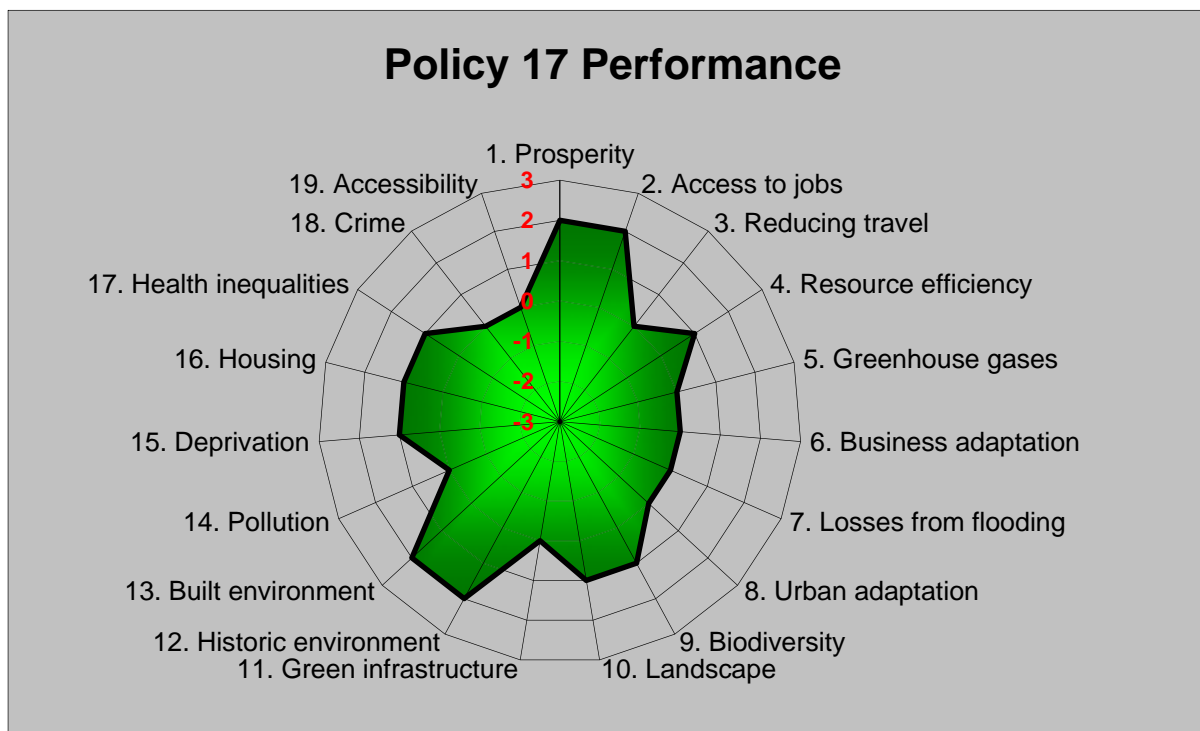
Three of the forecast effects are considered to have the potential to arise with beneficial effects upon biodiversity, green infrastructure and commercial assets objectives.

5.19 Appraisal of Policy 17: Countryside and Greenbelt

5.19.1 Forecast Effects

The policy is forecast to result in ten positive outcomes and nine neutral outcomes. Four moderate beneficial and six minor beneficial outcomes are anticipated, mainly attributable to the built environment, historic environment and access to jobs in rural areas (see Figure 5.20).

Figure 5.11. Sustainability Appraisal: Policy 17



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Mod +ve	Provides exemption to the Green Belt policy for the reasonable expansion of established businesses where there is a contribution to the local economy.
2. Access to jobs	Mod +ve	Provides exemption to the Green Belt policy for the reasonable expansion of established businesses where there is a contribution to the local economy.
12. Historic environment	Mod +ve	Provides for the consideration of the effects of development on the special character of small rural settlements that ought to lead to protection and conservation of historic assets.
13. Built environment	Mod +ve	Provides for limited infill and requires that development in the named small settlements consider their special characteristics.

Local	6	Unlikely	0	Direct	7	Positive	10	Maj +ve	0
Borough	4	Potential	9	Indirect	3	Negative	0	Mod+ve	4
Regional	0	Likely	0	Cumul	0			Min+ve	6
National	0	Definite	1					Neutral	9
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

Of the ten significant outcomes only three are indirect (biodiversity, deprivation, and health inequalities). The other seven significant outcomes are all direct; with four having the potential to be of borough-wide scale.

Within the sustainable consumption and production theme, the policy has the potential to deliver two moderate beneficial outcomes (prosperity and access to jobs) and one minor beneficial outcome (resource efficiency).

While neutral outcomes are forecast for the climate change and energy theme, four potential outcomes are forecast for the natural resource protection and environment theme, including two minor positive outcomes (biodiversity and landscape) and two moderate outcomes (historic environment and built environment). In terms of the sustainable communities theme, three minor positive (deprivation, housing and health inequalities) are anticipated. The effects upon deprivation are considered to be a potential beneficial outcome as green belt release for existing businesses applies across the Borough rather than focused releases in support of sites readily accessible from North Solihull.

5.19.2 Uncertainty

Only one outcome from the policy is considered to be definite to occur; the remaining nine all have a 'potential' to occur primarily being dependent upon the manner in which individual development proposals in the Countryside/ Green Belt respond to the policy.

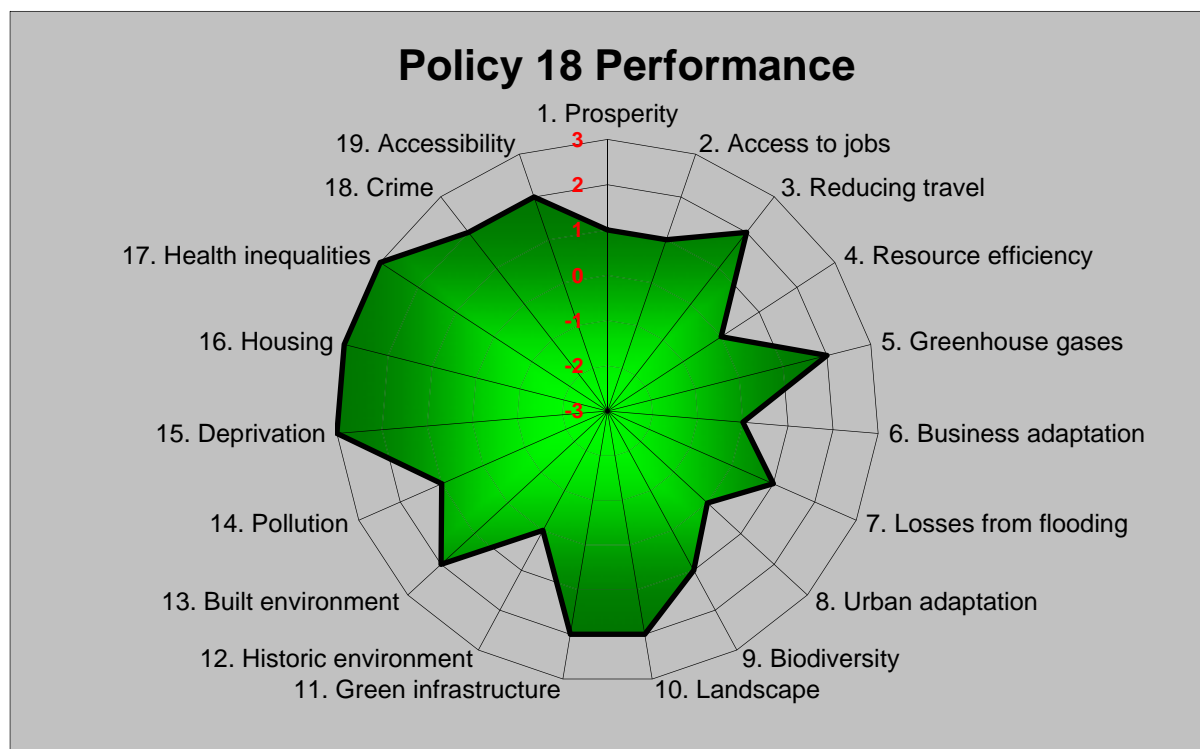
A key factor causing uncertainty in the anticipated outcomes is the extent to which 'reasonable' expansion of existing businesses in the Green Belt would be permitted. The uncertainty focuses upon the phrase 'reasonable expansion' since this implies that the business must currently be located into the Green Belt. While the policy would preclude large scale inward investment that would be new to the area unless within the remit of policy 1, the policy could be interpreted as allowing existing businesses located anywhere within the Borough to expand by new premises within the Green Belt.

5.20 Appraisal of Policy 18: Health and Well-Being

5.20.1 Forecast Effects

This policy emerged from observations on the adopted Local Plan (2013) and also recognition of the public health agenda in the draft National Planning Policy Framework. Unsurprisingly, the policy generates a highly positive outcome upon the sustainability framework delivering three major beneficial, seven moderate beneficial impacts and five minor beneficial outcomes with no adverse effects.

Figure 5.12. Sustainability Appraisal: Policy 18



SA Objective	Likely Significance Effects	Rationale
3. Reducing travel	Mod +ve	Policy has a strong focus upon improving physical fitness, as well as the objective of promoting sustainable modes of transport.
5. Greenhouse gases	Mod +ve	Measures to encourage sustainable travel choices and energy efficient housing are likely to also contribute towards reducing greenhouse gas emissions.
10. Landscape	Mod +ve	Landscape improvements are likely to be associated with improvements to the green infrastructure and the creation of an attractive public realm.
11. Green Infrastructure	Mod +ve	Direct improvements to green infrastructure are anticipated across the Borough.
13. Built environment	Mod +ve	The built environment is likely to be enhanced as a result of measures associated with delivering a high quality, attractive and safe public realm, as well as from resisting domination of hot food takeaways.
15. Deprivation	Maj +ve	Measures to deliver safe and inclusive design, and encourage social cohesion, with positive measures to promote well-being are expected to contribute towards addressing some of the deprivation issues found in parts of the Borough and also meeting the needs for older

SA Objective	Likely Significance Effects	Rationale
		people who increasingly experience disabilities and some forms of deprivation.
16. Housing	Maj +ve	Development of housing that delivers high performance standards will address the strong link between housing standards and public health.
17. Health inequalities	Maj +ve	Incrementally new development is likely to contribute towards reducing health inequalities by improved recognition of the health agenda during the formulation and consideration of development proposals. Significant developments will need to submit a Health Impact Assessment which is likely to have a positive effect on health, as will the need to minimise and mitigate against potential harm from obesogenic environments.
18. Crime	Mod +ve	The policy supports safe and inclusive design that discourages crime and anti-social behaviour.
19. Accessibility	Mod +ve	The policy should contribute to improved accessibility by promoting walking, cycling and public transport links, as well as improving access to recreational facilities.

<i>Local</i>	5	<i>Unlikely</i>	0	<i>Direct</i>	9	<i>Positive</i>	15	Maj +ve	3
<i>Borough</i>	10	<i>Potential</i>	5	<i>Indirect</i>	6	<i>Negative</i>	0	Mod+ve	7
<i>Regional</i>	0	<i>Likely</i>	5	<i>Cumul</i>	0			Min+ve	5
<i>National</i>	0	<i>Definite</i>	5					Neutral	4
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

Of the fifteen positive effects ten are considered to be of a Borough-wide scale, the other five being local. A total of ten of the effects were considered to be direct consequences of the policy with five being indirect.

In terms of the sustainable consumption and production theme, the policy is envisaged to deliver a moderate beneficial outcome and two potential indirect benefits particularly for those living in regeneration areas in terms of prosperity and access to employment.

The policy also has a potential link to contributing towards reducing some local risks associated with flooding through the promotion of green infrastructure. Adoption of green infrastructure networks along the River Blythe could offer sustainable drainage, and help to protect areas which are in proximity to flood risk zones, such as Hampton in Arden, Monkspath, Cheswick Green, and the Birmingham International Airport area. This could also help to reduce the threat of infrastructure disturbance under such events by reducing the likelihood of surface run-off, especially with regards to where the River Blythe intersects the M42.

Across the six natural resource protection objectives, there are three likely or definite moderate beneficial outcomes at a Borough scale (landscape, green infrastructure and the built environment). Two minor beneficial local outcomes are also likely or possible for biodiversity and pollution.

Not surprisingly it is under the theme of sustainable communities that the three major beneficial outcomes result. These are supported by a moderate positive outcome for crime.

5.20.2 Uncertainty

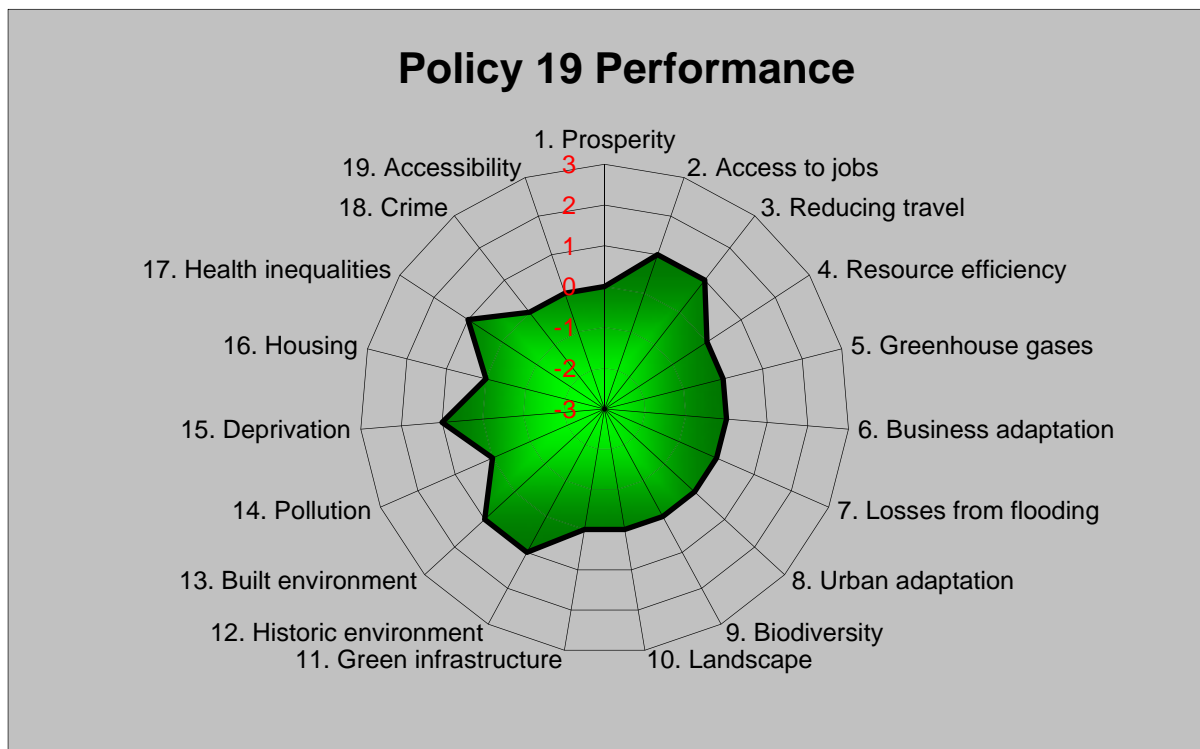
As can be seen from the table above, ten of the fifteen positive scores were considered to be likely or definite outcomes. Those where the effects were viewed as being a potential outcome were in relation to their effects upon prosperity, access to jobs, abating the losses from flooding and pollution all of which affect the determinants of health.

5.21 Appraisal of Policy 19: Range and Quality of Local Services

5.21.1 Forecast Effects

This policy has a limited impact upon the sustainability objectives with six minor positive effects predicted. The remainder of the outcomes are considered to be neutral (see Figure 5.22).

Figure 5.13. Sustainability Appraisal: Policy 19



Local	6	Unlikely	0	Direct	1	Positive	6	Maj +ve	0
Borough	0	Potential	5	Indirect	5	Negative	0	Mod+ve	0
Regional	0	Likely	1	Cumul	0			Min+ve	6
National	0	Definite	0					Neutral	13
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

Not surprisingly the policy has a distinct local focus to its minor beneficial outcomes. The policy has the potential to contribute towards reducing the need to travel through the retention of local shops and services, although it has no implications for climate change and energy.

In terms of the natural resource protection theme the policy is likely to have a direct minor positive effects upon the built environment and the historic environment given the requirement for development to be sensitive to local character and enhance the public realm.

Only two objectives within the sustainable communities theme deliver indirect minor beneficial outcomes for deprivation and health inequalities, both a function of the policy’s intention to sustain local shops and services which potentially provide health benefits to the elderly and those with disabilities.

5.21.2 Uncertainty

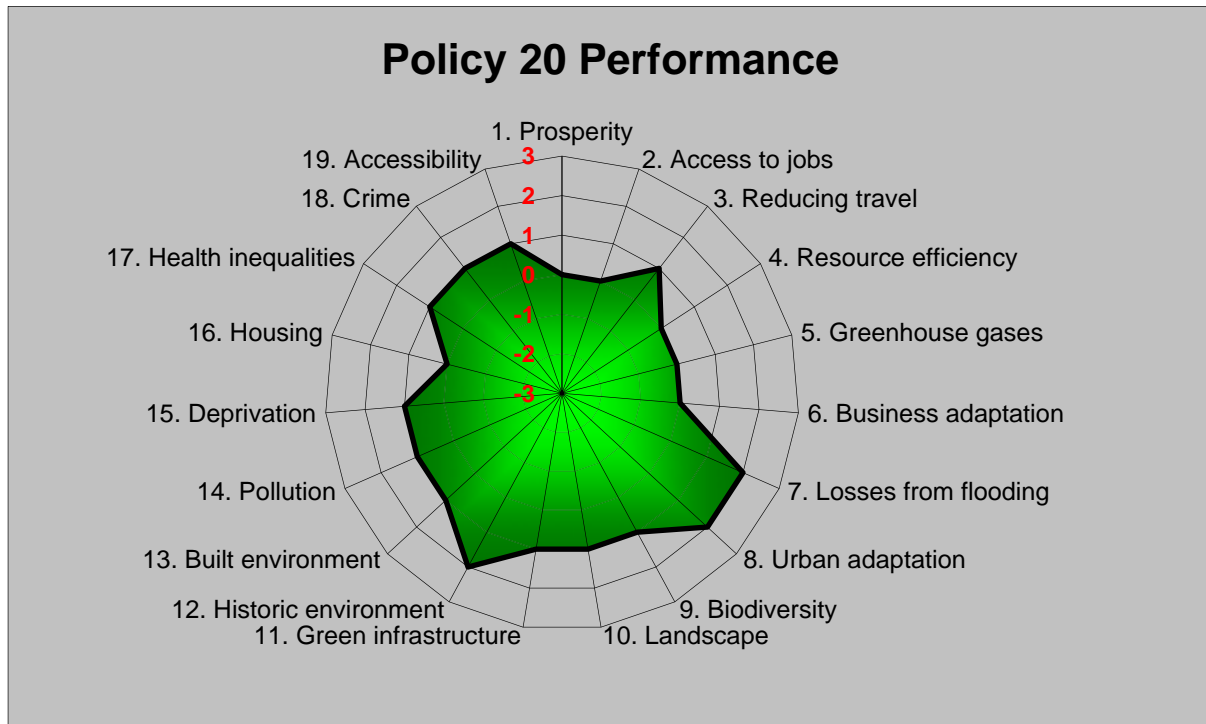
Of the six effects upon the sustainability framework from this policy only one is ‘likely’ to result in a positive effect, while five have the ‘potential’ to deliver a minor beneficial outcome.

5.22 Appraisal of Policy 20: Provision for Open Space, Children’s Play, Sport, Recreation and Leisure

5.22.1 Forecast Effects

This policy gives rise to three moderate beneficial effects with a further ten minor beneficial effects. A total of eight outcomes against the sustainability framework are neutral (see Figure 5.23). Ten of the thirteen effects are considered to be of a local scale with eight being an indirect consequence of the policy. Six of the outcomes are predicted to be neutral.

Figure 5.14. Sustainability Appraisal: Policy 20



SA Objective	Likely Significance Effects	Rationale
7. Losses from flooding	Mod +ve	Open space has a potential role in mitigating flooding.
8. Urban adaptation	Mod +ve	Protection and enhancement of open space has a role in mitigating the urban heat island effect.
12. Historic environment	Mod +ve	Seeks to 'encourage greater recreational and leisure use and enhancement of the river and canal network providing that the development safeguards the historic and natural environment'

Local	10	Unlikely	0	Direct	5	Positive	13	Maj +ve	0
Borough	3	Potential	5	Indirect	7	Negative	0	Mod+ve	3
Regional	0	Likely	7	Cumul	1			Min+ve	10
National	0	Definite	1					Neutral	6
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

5.22.2 Uncertainty

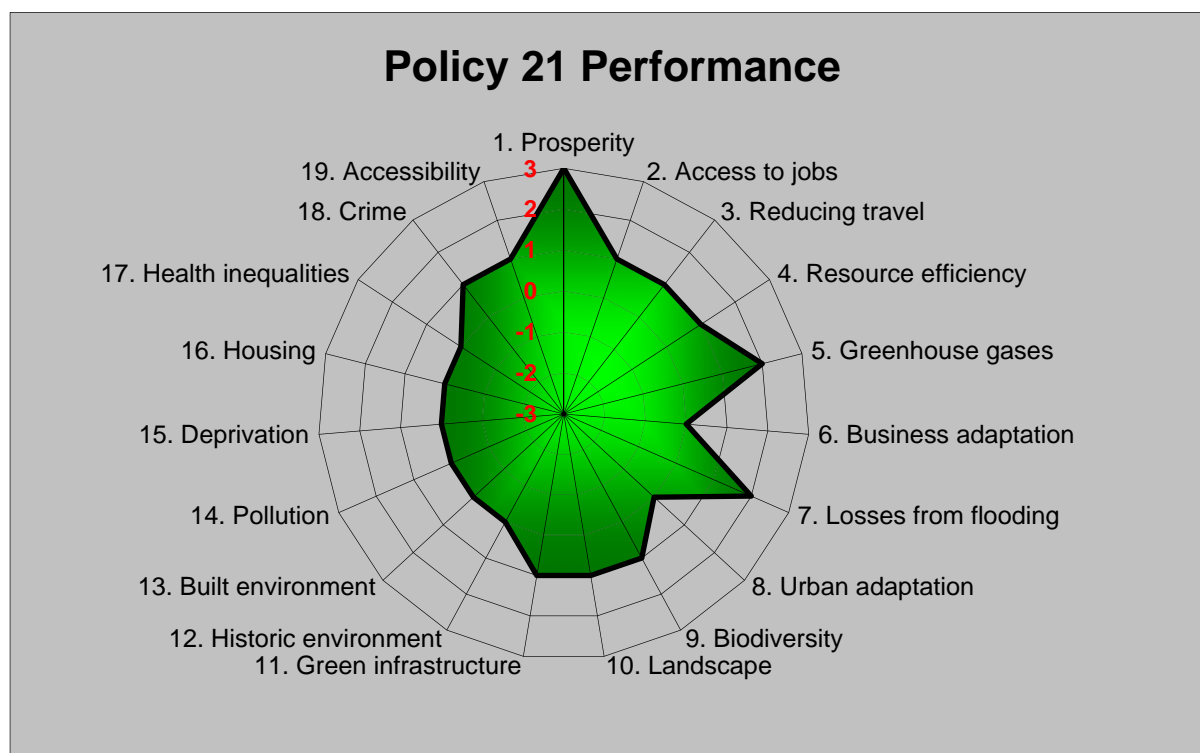
Of the thirteen recorded beneficial effects six were regarded as having the potential to occur with six being likely to occur or definite outcomes.

5.23 Appraisal of Policy 21: Developer Contributions and Infrastructure Provision

5.23.1 Forecast Effects

This policy has the potential to result in beneficial outcomes, with one major positive (prosperity), two moderate positive (greenhouse gases and flooding), plus eight minor positive effects (see Policy 21). There are no negative effects, with the remaining outcomes being neutral.

Figure 5.15. Sustainability Appraisal: Policy 21



SA Objective	Likely Significance Effects	Rationale
1. Prosperity	Maj +ve	Potential for contributions to be directed towards decentralised energy systems and heating networks to reduce carbon emissions.
5. Greenhouse gases	Mod +ve	Potential for contributions to be directed towards decentralised energy systems and heating networks to reduce carbon emissions.
7. Losses from flooding	Mod +ve	Potential for contributions to be directed towards flood protection measures.

Local	8	Unlikely	0	Direct	0	Positive	11	Maj +ve	1
Borough	3	Potential	10	Indirect	0	Negative	0	Mod+ve	2
Regional	0	Likely	1	Cumul	11			Min+ve	8
National	0	Definite	0					Neutral	8
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

6. Cumulative effects and conclusions

The table below presents the individual policy appraisal scores for the Local Plan. It is important to view the plan 'as a whole' as policies interact and can have synergistic, cumulative and/or mitigating effects.

SA Objectives	Draft Plan policies																						
	1	1a	2	3	4	5	6	7	8	8a	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Prosperity	3	3	2	2	2	2	0	1	0	1	3	0	0	1	1	-1	-1	0	2	1	0	0	3
2. Access to jobs	3	1	1	2	2	2	1	1	1	2	0	0	0	1	0	-1	0	0	2	1	1	0	1
3. Reducing travel	-2	-2	-1	1	2	0	0	1	2	-2	0	0	0	1	2	0	1	0	0	2	1	1	1
4. Resource efficiency	-3	0	2	1	1	0	0	1	1	0	2	0	2	2	2	0	1	0	1	0	0	0	1
5. Greenhouse gases	-3	-1	-1	-1	0	-1	0	1	2	2	3	0	0	2	1	0	1	0	0	2	0	0	2
6. Business adaptation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Losses from flooding	0	0	0	0	0	0	1	0	0	0	2	1	3	0	0	1	2	0	0	1	0	2	2
8. Urban adaptation	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	3	-1	0	0	0	2	0
9. Biodiversity	-1	-1	0	1	-1	-1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1
10. Landscape	-2	-1	1	1	-1	-2	1	0	0	0	1	1	1	1	1	1	1	1	1	2	0	1	1
11. Green infrastructure	1	0	1	0	-1	0	1	0	0	0	1	1	1	0	1	0	1	1	0	2	0	1	1
12. Historic environment	-1	-1	-2	1	-1	-1	-1	0	0	0	0	0	0	1	-1	0	1	3	2	0	1	2	0
13. Built environment	1	1	1	1	0	0	1	0	1	0	1	0	0	1	0	1	3	3	2	2	1	1	0
14. Pollution	-1	-1	-1	1	0	-1	1	0	1	1	-1	0	1	1	1	2	0	0	0	1	0	1	0
15. Deprivation	1	1	2	2	2	1	1	1	1	1	1	0	0	0	0	1	1	0	1	3	1	1	0
16. Housing	0	1	2	1	3	3	1	0	0	0	0	0	-1	0	0	0	-1	0	1	3	0	0	0
17. Health inequalities	1	1	1	0	1	2	1	1	2	0	1	1	1	0	0	1	2	0	1	3	1	1	0
18. Crime	0	0	0	0	0	1	-1	1	1	0	0	0	0	0	0	0	1	0	0	2	0	1	1
19. Accessibility	2	1	3	1	0	1	0	1	1	2	0	0	0	0	0	0	1	0	0	2	0	1	1
Total	-1	2	11	14	9	6	8	9	13	7	18	6	9	12	9	6	18	8	14	28	6	16	15

6.1 Discussion of cumulative effects

Numerous plan policies are predicted to have positive effects upon economic prosperity, regeneration and employment. In particular, Policies 1, 1a, 9 and 21 would have major positive effects. Planning to deliver the economic opportunities associated with the UK Central Hub Area, along with commensurate growth in housing, and supporting infrastructure ought to ensure significant positive effect.

The need to secure high quality design that does not affect amenity could act as a barrier to growth in some locations, but the issues ought to be possible to resolve, and so in the long term, higher quality design lends itself to more attractive locations for business and homes.

Supporting the growth in the economy is a number of policies that should work synergistically to improve accessibility and encourage modal shift. Overall, the effects of the plan would be positive. Conversely, although positive effects are predicted with regards to accessibility, elements of the plan could lead to an increase in travel distances given the regional travel to work area of the UK Central Hub Area.

These increased travel distances would also have a knock-on effect on resource efficiency and greenhouse gas emissions. However, other plan policies would help to improve resource efficiency which somewhat offsets the negative effects associated with economic growth. Overall, the effects are predicted to be neutral.

The plan has broadly neutral effects in terms of climate change resilience/adaptation; though there are some positive effects related to the requirement for high quality sustainable design and sustainable urban drainage systems.

The plan is predicted to have potential negative effects on biodiversity, landscape and the historic environment due to the scale and location of growth on Green Belt sites in particular. Though these effects are not predicted to be major, there are cumulative effects across the borough. Plan policies that seek to protect and enhance biodiversity and landscape ought to minimise the negative effects that could potentially occur. Key to ensuring that significant negative effects are avoided is to ensure that strategic green infrastructure is enhanced and helps to improve connectivity between ecological networks.

Positive effects upon the built environment are predicted, as the plan seeks development to achieve the highest possible level of quality in design. In some locations, there may be opportunities to improve gateway locations into the Solihull urban area, though this will be dependent upon the quality of design.

Development could have a minor negative effect upon air quality, noise and amenity, especially where there are existing constraints such as the Birmingham International Airport and strategic road networks / junctions. It will be important to apply plan policies that seek to mitigate such effects to ensure that negative effects are managed. Several plan policies, particularly Policy 14 ought to have a positive effect upon amenity, noise and air quality or at least help to mitigate potential negative effects.

Through meeting the Borough's housing needs, and supporting economic growth, a major positive effect is predicted with regards to housing and social inclusion. In combination with improved accessibility to services and facilities, significant positive effects have been identified for health and wellbeing. Provided that new opportunities are made available to deprived communities, and housing development promotes mixed tenures and high quality design, development should lead to a narrowing of the gap in health inequalities in the long term.

7. Next steps

The Council has prepared a draft Local Plan outlining the preferred strategy and supporting policies. Following the consultation period on the Local Plan the Council will work towards the publication of a final draft Local Plan. This will take account of consultation feedback, the findings of the SA (as set out in this interim report) and any new evidence.

A full SA Report will be prepared to support the publication version of the Local Plan. This will involve updating the interim SA Report as necessary, as well as establishing potential monitoring measures. Further mitigation or enhancement measures will also need to be considered, as well as revisiting the consideration of alternatives in light of any new evidence.

The timetable moving towards Adoption of the Local Plan is set out in Table 8.1 below.

Table 8.1 – Timetable

Date	Milestone
Nov 2016 – February 2017	Consultation on the draft Local Plan
Mid 2017	Regulation 19 consultation on the Local Plan
Summer / Autumn 2017	Submission of the Local Plan and key evidence
TBC	Examination
TBC	Adoption

At each of these stages, it may be necessary to undertake additional iterations of SA to account for changes/modifications to the Plan.

APPENDIX A: Schedule of consultation responses

The table below summarises responses received during consultation on the Scoping Report. The Council's response is also provided.

Representation	Council response
<p>Natural England</p> <ul style="list-style-type: none"> The baseline information is generally sufficient. Key considerations within the overall plan should recognise that development (soil sealing) has a major and usually irreversible adverse impact on soils. Mitigation should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process. <p>Natural England recommends that distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.</p> <p>There is a risk that in some situations, development on land of limited biodiversity value in its own right can lead to the creation of islands of biodiversity, permanently severed from other areas. We thus suggest adding "<i>Ensure current ecological networks are not compromised, and future improvements in habitat connectivity are not prejudiced</i>"</p> <p>Green infrastructure is a cross cutting theme that should be considered throughout the SA. Noise and light, geology and woodland should all be considered through the SA.</p> <p>It is important that any monitoring indicators relate to the effects of the plan itself, not wider changes. Bespoke indicators should be chosen relating to the outcomes of development management decisions.</p>	<p>Noted.</p> <p>Noted.</p> <p>The site appraisal framework makes distinctions between the hierarchy of international, national or locally designated sites.</p> <p>Noted. SA Framework amended accordingly.</p> <p>Noted.</p> <p>Agreed. Suggested indicators will be borne in mind.</p>

<p>Turleys</p> <p>We fully support the comments set out in Paragraph 4.2.11 and 4.2.12 which state that HS2 has, and will continue to attract, substantial inward investment within Solihull and the wider region which will help maintain high levels of employment and economic prosperity. In an increasingly competitive economy, HS2 and Arden Cross will make a valuable contribution to the local and regional economy.</p> <p>The Consortium agree with paragraphs 4.3.3 – 4.3.5 which state that Solihull Train station is struggling to meet current demand and future growth and therefore a new station is required to continue to provide residents with a more sustainable option for transportation.</p> <p>The Consortium recognise the need for new development to mitigate and adapt to climate change and support the conclusion of the SA Scoping Report that emissions from the built environment are likely to reduce as result of increasingly stringent national standards.</p> <p>The Consortium support the need to protect and enhance the green infrastructure network within Solihull and are committed to ensuring that Arden cross improves the accessibility and quality of green infrastructure for residents and workers within the site boundaries.</p> <p>The Consortium note that despite the relatively strong local economy and wealth distribution, there are still a number of areas of deprivation within the Borough which remain despite local and regional economic growth.</p> <p>The Consortium considers that the provision of new private and affordable housing within Solihull is a key social sustainability issue which requires radical action to address both locally and nationally.</p> <p>The Consortium generally supports the SA framework however it is considered that the achievement of sustainable development within the Borough could be enhanced through the following amendments:</p> <ul style="list-style-type: none"> • An additional assessment criteria should be added to objective 15 in order to capture the substantial benefits of the HS2 and supporting development for local residents; and • Ensure the benefits of HS2 are shared amongst all residents of Solihull. 	<p>Support noted. No changes deemed necessary.</p> <p>Objective SA1 already covers the importance of the HS2 and its contribution to regeneration.</p>
<p>It is expected that the SA accompanying the Draft Solihull Local Plan takes into full consideration the housing shortfall identified in Birmingham and the HMA, and that justification is provided in the SA for Solihull's proposed level of contribution (2,000 dwellings) to the housing shortfall.</p>	<p>The SA will test the implications of the proposed level of contribution, as well as higher and lower levels of contribution. It is the role of the Local Authorities to provide justification for the decisions made.</p>

Historic England

To accord with the language and emphasis of national planning policy, Historic England suggests the following alternative text for SA Objective 12.

To conserve and enhance the historic environment, heritage assets and their settings.

Unfortunately the (site appraisal criteria for heritage) are an over simplification of the criteria in national planning policy and as a result, if applied may well give rise to a false impression as to whether the proposal would *conserve and enhance the historic environment, heritage assets and their settings*.

The test refers to the distance of development from heritage assets and or whether it is prominent and or screened. Again these can give a false impression as to the relative harm. Just because a development can be seen doesn't necessarily mean it causes harm and is unacceptable. The following categories are recommended.

Heritage asset (listed building, ancient monument, registered parks and gardens, historic parkland, building of local interest) on site and likely to be lost as part of development. Development is likely to result in substantial harm to a designated heritage asset (NPPF, Paragraph 132 & PPG 01-7) arising as a result of the loss of a heritage asset or a considerable impact on its importance. = **Red**

Heritage assets within 100m of site:
Setting likely to be adversely affected as the site is unscreened / visually prominent Development is likely to result in less than substantial harm to a heritage asset including its setting. The level of harm is likely to be effected by the proximity and likely compatibility of future development. = **Amber**

Development is unlikely to affect the significance of a heritage asset or provides a positive opportunity to enhance or better reveal that significance = **Green.**

8.4.11 and the footnote to page 79 unfortunately refer to previous guidance on setting and tall buildings that has since been replaced. These new versions can be viewed on the Historic England website.

Changes made to SA Objective 12.

<p>The Highways Agency</p> <p>We believe that SMBC could consider the following policies and guidance relating to transport within the draft SASR:</p> <ul style="list-style-type: none"> • Department for Transport’s (DfT) ‘Strategic road network and the delivery of sustainable development’ (DfT Circular 02/2013) policy; • Highways England’s ‘The strategic road network, planning for the future’ (2015) document, which includes advice on the planning support we can offer; • The West Midlands Local Transport Plan (2011-2026), which is the statutory document setting out transport strategy and policies in the West Midlands area to 2026 	<p>Noted. Documents included as part of the policy review.</p>
<p>Summix FHS Developments LLP</p> <p><u>Contextual review</u></p> <p>The following documents should be considered:</p> <p><i>EC Guidance on the SEA Directive – Implementation of Directive 2001/42 on the assessment of the effects of certain plans and programmes on the environment, September 2003</i></p> <p><i>The Planning Inspectorate - Local Development Frameworks: Examining Development Plan Documents – Learning from Experience, September 2009</i></p> <p><i>Local Development Frameworks: Examining Development Plan Documents – Soundness Guidance, Planning Inspectorate, August 2009 and update February 2010</i></p> <p><i>Principles of Plan Making, Chapter 6 The Role of Sustainability Appraisal, PAS April 2013.</i></p> <p><u>The process of scoping is described incorrectly</u></p> <p><u>Evidence documents and baseline information</u></p> <p>Several important studies have not yet been finalised and should be included in the SA. The scoping process is flawed without including these documents. In particular, there is no reference to Green Belt.</p> <p>Baseline data is out of date.</p> <p><u>Sustainability issues</u></p> <p>The sustainability issues that concern the Plan have not been clearly identified.</p> <p><u>The SA Framework</u></p>	<p><u>Contextual review</u></p> <p>It isn't necessary to include guidance on SA if the process is correctly applied. The role of an SA Report is not to discuss research and papers on SA and plan making, but rather set out the requirements of the SEA Regulations.</p> <p>There is no requirement to prepare a scoping report. So this is just incorrect. Our interpretation of the requirements is in line with the SEA Regulations.</p> <p><u>The process of scoping is described incorrectly</u></p> <p>There is no requirement to prepare a scoping report. Our interpretation of the requirements is in line with the SEA Regulations.</p> <p><u>Evidence documents</u></p> <p>The scope is fluid and will be updated when studies are available. The fact these studies are not available yet does not mean the scoping process is flawed.</p> <p>The issue of Green Belt will be taken into account in the SA.</p> <p><u>Sustainability issues</u></p> <p>The SA Framework includes a list of key issues for each sustainability objective. This clearly shows how each was derived.</p> <p>The framework sets out objectives and</p>

The framework doesn't set out the objectives, indicators and targets to be used in the assessment.

Objective 1: Refers to 'specific community groups' but an explanation of what these are is not provided. It is not clear why regeneration should only be targeted towards these specific community groups.

Objective 3 – The objective only refers to 'existing physical infrastructure'. Given the scale of development required, new infrastructure will be needed. It is not clear how new infrastructure requirements will be assessed.

Objective 4 - Covers the issues of land, water, waste, ecology and resource efficiency. By including so many different issues within one objective it will make the results of the SA very difficult to interpret and to identify how the different issues perform. Given the importance of the Green Belt issue, land use should be a separate Objective so that the type of land use can be easily identified and the related impacts clearly understood.

Objective 6 – It is not clear how the plan would assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of climate change and, therefore, how this could be measured.

Objective 7 – The objective only refers to reducing the 'economic losses of flooding', it does not make reference to reducing the risk of flooding in general, as required by the NPPF.

Objective 9 – The objective should include the need to protect as well as enhance ecology and biodiversity.

Objective 10 – It is not clear why climate change is included within this objective. Any specific issues that relate to the impact of climate change on the landscape should be explained.

Objective 14 – This objective covers the issues of pollution including air, soil, water, light and noise pollution. The supporting detail however refers to the need to preserve the best and most versatile agricultural land, which appears out of place in the pollution section and would be more appropriate in Objective 4 which covers land use. The key issues identified refer to the issues of airport noise, however, the supporting detail of the Objective refers to road traffic noise.

Objectives 15 – 19 – The title of this section should be Sustainable Communities, not Natural Resource Protection and Environmental Enhancement. These objectives use ambiguous language, cover too many different issues within individual objectives and repeat several issues within different objectives.

Objective 16 – It is not clear why the issues of urban design, crime, gypsies and travellers are included with the

supporting questions. Indicators and targets do not have to be identified at this stage. Monitoring should focus on significant effects, which have not yet been established.

Objective 1: The objective seeks to close the gap between deprived areas and not deprived. The objective has been amended to ensure that it is clear that all groups should benefit where possible.

Objective 3: The objective seeks to steer development so that it makes best use of existing infrastructure. This doesn't mean that new infrastructure will not be considered. The objective has been changed to make this clear.

Objective 4: The objective does not cover ecology. It covers the efficient use of resources which includes land, minerals and waste.

It is not thought necessary to highlight 'Green Belt' an issue on its own as the impacts relating to landscape and soils will both pick up potential effects on green belt. A further objective on Green Belt will be repetitive and put too much emphasis on green belt status.

Objective 6: Plan policies can help to deliver developments and improvements to the public realm that help to reduce flood risk, adapt to hotter summers.

Objective 7: Noted. Changes made accordingly.

Objective 9: Noted. Changes made accordingly.

Objective 10: Noted.

Objective 14: Noted. Changes made accordingly.

Objective 15: Noted. Changes made accordingly.

Objective 16: Provision of gypsy and traveller accommodation is a housing issue. Urban design cuts across all areas, but is perhaps most relevant to the design of developments. Objective amended to remove reference to crime.

Objective of providing for housing needs. Such issues should be included in other more appropriate objectives.

Objective 17 – This Objective is trying to cover far too many issues with the aim of the ‘integration of systems’. The real focus of the Objective is in fact Health and Wellbeing, although the only issue that is referred to in the supporting information is the need to address the needs of the elderly. The needs of the rest of the population also need to be considered.

Objective 18 – The Objective addresses crime. The inclusion of crime issues in Objective 16 are therefore not needed.

Objective 19 – The objective is trying to cover far too many things. Such a broad range of issues in one objective will lead to unclear results in the appraisal.

Methodology

There is no methodology set out in the report.

Site appraisal

The site appraisal methodology is fundamentally flawed

Objective 17 - The objective focuses on old people as this is a key issue identified through scoping. There is a need to ensure that the SA is focused. However, we agree that the needs of all need to be considered. The framework has been amended accordingly.

Objective 18 – Noted.

Objective 19 – Noted.

Methodology

The SA Framework is the basis for appraisal. Effects will be considered in relation to each objective. The effects characteristics listed in the representation will all be covered. We have not yet established the exact methodology and presentation. Comments noted. The consultation gives stakeholders the opportunity to comment on the methodology and what they think it should look like.

Site appraisal

Disagree that the appraisal is flawed. An introduction and further information is provided to establish assumptions and limitations.

Cerda Planning

Cerda Planning are satisfied that the scope of the SA adequately identifies the full range of topics necessary to support the emerging Local Plan Review. The Scope has identified where the focus will be to assess the likely significant effects of the Local Plan centred on environmental, economic and social impacts. It clearly sets out the context, objectives and approach of the assessment; and identifies relevant environmental, economic and social issues and objectives.

It is our view that the SA objectives will generally ensure that the proposed Solihull Local Plan policies will consider the needs of Solihull in terms of their environmental and socio-economic effects. However there are some specific comments as follows which relate to the following objectives:

SA14- To minimise air, soil, water, light and noise pollution. Point c) states “to conserve the best and most versatile agricultural land.”

In the Scoping Report document, Figure 4.7 shows the vast majority of agricultural land in Solihull as Grade 3, however there is no differentiation between grades 3a and 3b. We consider this to be a major omission as 3b is not considered to be “best and most versatile”

- Revision of Figure 4.7 should show differentiation between Grades 3a and 3b
- Para 4.4.10 needs to be altered in light of the revision to 4.7. i.e. whether the majority is 3a or 3b.*
- SA Objective 4 appraisal criteria need to be changed to Grades 1-3a.

Support noted.

With regards to agricultural land, we acknowledge that Grade 3 is made of two sub classifications and that only 3a is considered to be best and most versatile.

The data available does not differentiate, hence the use of only one category for Grade 3. If more detailed data becomes available we will update the baseline position and site appraisal criteria accordingly.

APPENDIX B: Appraisal of alternatives for housing growth and distribution

This appendix presents a detailed appraisal of the twelve reasonable alternatives for housing growth and distribution.

The appraisal presents the significance of predicted effects using the following scale.

Symbol	Significance of effects
✓✓✓	Major significant positive effects
✓✓	Significant positive effects
✓	Positive effects
-	Neutral effects
✗	Negative effects
✗✗	Significant negative effects
✗✗✗	Major significant negative effects

Significance is determined through reference to the characteristics of the effects, and includes consideration of duration, scale, permanence, spatial influence, likelihood and sensitivity of receptors. Justification for the scores is provided throughout the appraisal tables.

		Options				
SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
1. Regeneration	a. Meet needs	✓	✓✓	-	-	✓
	b. Needs+	✓✓	n/a	✓	✓	✓✓
	c. Needs ++	n/a	n/a	✓✓✗	✓✓✗	✓✓✓✗
<p><i>To contribute to economic development initiatives that benefit regeneration and the Borough’s communities; especially those identified as deprived.</i></p> <p>Each alternative will involve employment growth in suitable locations, which is positive in terms of supporting economic development and regeneration. To ensure that opportunities benefit communities of need, it is important to deliver housing to support such communities, and to locate new homes and jobs in areas that are accessible to one another (and existing homes).</p> <p>The major regeneration opportunities are associated with North Solihull, UK Central and the HS2 interchange. Therefore, distribution alternatives that focus on these areas (2 and 5) are likely to have the greatest benefits.</p> <p>Distribution of growth along transport corridors and hubs is also predicted to have positive effects, as it will help to support those that have no access to a car or prefer to travel by alternative means. A dispersed approach could help to support the vitality of rural centres, and diversification of the rural economy (alternative 4), which is beneficial for such communities. However, this would not help to further regenerate areas of greatest need.</p> <p>At growth scenario A, the positive effects are at a lesser magnitude, and so only minor effects are predicted with the exception of alternative 2a, which directs growth to the areas of greatest need. At growth scenario B, the effects are more prominent for each alternative, with 5b generating a moderate positive effect due to its inclusion of growth initiatives at UK Central and the HS2 interchange as well as at a modest level at different settlements throughout the borough.</p> <p>At higher levels of growth such as for 3c and 4c in particular, development within the urban areas / regeneration priorities may not come forward as readily given the attractiveness of large greenfield sites in parts of the ‘rural area’. This could have negative implications in the short term, though a phased approach to site release would negate these effects.</p>						

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
2. Employment	a. Meet needs	✓	✓	✓	✓	✓
	b. Needs+	✓	n/a	✓	✓	✓
	c. Needs ++	n/a	n/a	✓	✓	✓

To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.

Alternative 1, which focuses development into accessible locations and along transport corridors will help to increase the proportion of new development that has good access to employment, education and training opportunities. The focus on the UK Central Hub Area and HS2 should also present good opportunities to match housing to employment and education opportunities. A focus on urban extensions or new settlements may not necessarily lead to development in areas that are in need of enhancement or growth. However, large mixed use developments in themselves could help to improve education facilities by creating the economies of scale to support new schools. Alternative 5 takes a relatively balanced approach and ought to ensure that access to jobs and education is fairly evenly spread whilst taking advantage of specific opportunities such as the UK Central Hub Area.

Competition for jobs is likely to remain the same under each growth scenario, but local residents ought to have an advantage over those that would need to travel. In this respect, alternatives 1, 2 and 5 are most beneficial as growth would be in accessible locations and matched to specific growth initiatives.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
3. Transport and infrastructure	a. Meet needs	✓✓	✓✓/✗	✓	✗	✓
	b. Needs+	✓	n/a	✓✓/✗	✓/✗	✓
	c. Needs ++	n/a	n/a	✓✓/✗✗	✓/✗✗	✓/✗

To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.

Scenario 1a and 1b allocates development around existing public transport corridors, thereby strengthening these services, and contributing to a reduced reliance on the private vehicle. Development would be located in areas that are best equipped to provide sustainable travel choices, which is predicted to have a **positive effect** on transport patterns; however concentration of development, particularly in the west of the Borough, could also result in a more congested highways system (unless supported by infrastructure upgrades. This would more likely be the case under scenario 1b than 1a, and so the positive effects are lower in magnitude for 1b.

Similar effects are likely to be experienced under scenario 2a, whereby concentration around a transport hub (HS2 Interchange) could encourage more sustainable modes of transport (in the longer term). Development would also be closer to major sources of employment growth, which should help to reduce the length of journeys. Conversely, significant growth in and around the north to support the UK Central Hub Area and HS2 could increase traffic on local roads, having potential negative effects on the network in these locations.

A focus on urban extensions to Solihull in particular would increase the amount of cars on the road networks from these areas to Solihull Town Centre, the UK Central Hub Area and other major sources of employment and retail/leisure. The effects would be dependent upon securing extended public transport networks, the provision of local services and potential infrastructure improvements (which could help to relieve congestion).

The urban edge is relatively well served by existing public transport links, which ought to make it easier to integrate new development without having a major negative effect on road networks. However, the use of private cars is still likely to increase in these areas, which would have potential negative effects on routes to the town and major sources of employment. For growth scenario a, the effects are only predicted to be minor, though these increase with a higher level of growth under 3b and 3c (which could have moderate negative effects given the large scale expansion of the Solihull urban area.

Development focused more on rural and 'new' settlements are less likely to be served by existing public transport links, or major road infrastructure. This could generate more and longer vehicle trips compared to the urban centred alternatives; which is a negative effect. It is probable that new settlements would require infrastructure to support expansion, which could actually help to improve facilities in the more rural locations where investment would be otherwise unlikely. Such development could also help to support more viable services and facilities, reducing the necessity to

travel by car as much. These are recorded as positive effects for Alternative 4a, 4b and 4c (with an increased likelihood that strategic improvements would be secured for the higher growth scenarios (4c). However, at a higher level of growth, alternatives 4b and 4c would put more vehicles onto the roads, and the trips would be likely to be longer to key areas of employment growth such as the UK Central Hub Area, HS2 and Solihull itself.

Alternative 5 distributes development to different parts of the Borough, with targeted growth at accessible settlements, HS2/ UK Central Hub Area and a number of sustainable urban extensions. The spread of development ought to help avoid too much pressure on local routes, whilst also taking advantage of existing infrastructure (transport hubs and accessible settlements) and locating a proportion of new development close to major areas for employment growth. This approach ought to reduce the likelihood of negative effects on traffic, though the positive effects would also be diluted compared to alternatives 1 and 2.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
4. Resource efficiency	a. Meet needs	-	-	-	-	-
	b. Needs+	*	n/a	*	*	*
	c. Needs ++	n/a	n/a	**	**?	**

Minimise the use of natural resources such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling.

Development produces waste and uses resources regardless of location during construction and also operation. Therefore, each distribution option is predicted to have similar effects in this regard. Development by nature is likely to use resources (minerals, energy and water), and so the nature of effects is most likely to be affected by the scale of growth. For growth scenario A, the level of growth would be in-line with population projections for the borough, and therefore, the effects on resource use are predicted to be broadly neutral for each distribution alternative.

Growth scenarios b and c are likely to lead to greater waste generation overall (though this would be offset from Birmingham, which is unable to meet its own housing needs). Growth Scenario B would see an increase in waste generated and resources expended, which is considered to be a minor negative effect for each alternative. However, Growth Scenario C is predicted to have moderate negative effects for each alternative reflecting the substantially higher housing targets involved.

With regards to recycling and waste collection, no option is predicted to be significantly more beneficial than another. There is widespread access to recycling facilities across the borough including kerbside collections and also at recycling points. Existing waste collection regimes span the entire borough, and are routine in urban areas. Therefore, growth in any one area could be planned into new routes relatively easily. A more dispersed / rural approach would create longer and less efficient waste collection regimes, but each of the options focuses on key settlements/expansions to one degree or another, which avoids such issues.

Minerals safeguarding areas exist to the east of the Borough. For distribution alternatives 1, 2, 3 and 5, it ought to be possible to avoid substantial development within these areas at all scales of growth. However, for alternative 4, which could see more development in rural settlements such as Meriden and Balsall Common, there is potential for mineral resources to be affected. An uncertain negative effect is predicted at this stage.

Each of the alternatives includes a loss of agricultural land and Green Belt. The majority of this agricultural land is classified as either Grade 4 or Grade 3. It is unclear which elements of Grade 3 land are 3a or 3b. Therefore, there is an element of uncertainty around the effects of development for each of the alternative distribution options. Notwithstanding this, it is possible to determine that the overall effect on best and most versatile agricultural land is unlikely to be significant (given that Grade 1 and Grade 2 land is unaffected across the alternatives). At higher levels of growth though, the loss of Grade 3 agricultural land would increase, which is recorded as a minor negative effect for alternatives 3, 4 and 5 under growth scenario C.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
5. Greenhouse gases	a. Meet needs	-	- / ?	-	-	-
	b. Needs+	*	n/a	* / ?	*	* / ?
	c. Needs ++	n/a	n/a	* / ?	*	* / ?

Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation

Development will generate emissions regardless of location as a result of construction and accommodation of buildings. In this respect, the effects are related to growth, rather than distribution. As such, Growth Scenario A would be predicted to have broadly neutral effects; Growth Scenario B and C would have minor negative effects.

In terms of distribution, each alternative is equally likely to result in an increase in energy usage and associated emissions. They cannot be differentiated in this respect, as high quality design is not location dependant. However, opportunities to deliver low carbon energy schemes as part of strategic development are more likely to be feasible where there is a concentration of development and in particular an existing demand for energy (heat for example) or existing distribution networks.

In this respect, alternatives that focus development close to the urban area and UK Central Hub, are perhaps more likely to support the development or expansion of district heating systems and other low carbon technologies that benefit from economies of scale. Consequently, alternatives 2a, 5b and 5c are predicted to have a potential positive effect.

A dispersed approach is the least likely to lead to such opportunities so positive effects are less likely for alternative 1 and 4. Conversely, the development of a new settlement or large scale urban extension could perhaps provide opportunities to secure strategic infrastructure for distributed energy. Mixed use developments would typically offer a more varied demand for energy too. At this stage, any positive effects are uncertain.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
6. Resilience to climate change	<i>a. Meet needs</i>	?	?	?	?	?
	<i>b. Needs+</i>	?	n/a	?	?	?
	<i>c. Needs ++</i>	n/a	n/a	?	?	?

To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.

Businesses can be at risk from the effects of climate change such as flooding (which could directly affect premises, or sever routes that are used by workforce and to transport goods) and hot weather (which could affect workforce comfort). To become more resilient to such effects, businesses ought to locate in premises with good resource efficiency, cooling facilities and on networks that are less vulnerable to flooding. The design of new development can help to achieve such resilience, and could be implemented regardless of location. Locational factors such as access to services, goods and transport routes are likely to affect resilience, as premises that are less isolated ought to have a better chance of responding to climate change events (e.g. different routes and modes of transport). At this high level it is difficult to differentiate the alternatives. However, option 1 is perhaps the most favourable as its focus is upon accessible development; which ought to be beneficial for commuters. A more rural/dispersed approach could see more dwellings located in more isolated areas that have less scope to respond to climate events. These are uncertain effects though.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
7. Flooding	a. Meet needs	-	?	-	-	-
	b. Needs+	*	n/a	?	?	?
	c. Needs ++	n/a	n/a	*	*	*

Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses

There is potential for flooding from various sources within Solihull, including watercourses, surface water and groundwater. The majority of potential development sites do not overlap with fluvial flood risk zones 2 or 3, and are located at a distance so as not to exacerbate the threat (provided that SUDs are implemented that achieve no net increase in surface water run off or infiltration). Development under growth scenario A broadly avoids locations which are at risk of fluvial flooding, with only a small amount of overlap between the some site options and flood zone 3. It ought to be possible to avoid areas at risk of flooding and to mitigate potential risk for all five distribution alternatives at this level of growth.

However, whilst surface water flooding occurs across the Borough, there has been a concentration of these events in the west which has been attributed to overland flows, inundation of the sewage system, and overtopping of the drainage ditches². The focus of development under scenario 1a could therefore exacerbate surface flood events and have a negative effect. This is particularly the case at a higher rate of growth under scenario 1b which would involve more growth and also be likely to involve sites which overlap with flood zone 3.

Scenario 2a sees development concentrated in the north of the borough. Some overlap exists here between potential development sites and flood zone 3. Concentrated development could also result in increased surface water run off which becomes more difficult to manage. However, the strategic nature of sites should allow for enhancement of green infrastructure and implementation of SUDS to mitigate potential negative effects. There would be a much lesser need for further development in the rest of the Borough to meet needs under this scenario, and therefore flood risk elsewhere would be unlikely to change.

A proportional amount of growth at sustainable urban extensions and existing developed areas should allow for suitable sites to be developed without encroaching on areas at risk of flooding. Provided that development is designed to ensure no net increase in run off or impermeable land, the effects on the baseline position ought to be negligible. Higher levels of growth could be countered to a degree by infrastructure enhancement. However, the potential for negative effects on hydrology would increase for growth scenario C. Therefore, a negative effect is predicted for alternatives 3c, 4c and 5c.

Development of new settlements at the locations under alternative 4b and 4c is likely to avoid exacerbation of flood risk; however growth as allocated under scenario 4c may put stress on the flood management systems which exist in these smaller settlements. This, combined with the loss of what is likely to be permeable, agricultural land, means the scenario is considered to incur a negative effect.

² Preliminary Flood Risk Assessment Report, 2011, Available: <http://www.solihull.gov.uk/Portals/0/CrimeAndEmergencies/PFRA.pdf> Accessed: 27/06/16

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
8. Climate change adaptation	a. Meet needs	-	?	-	-	-
	b. Needs+	?	n/a	-	-	-
	c. Needs ++	n/a	n/a	?	?	?
<i>To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.</i>						
<p>With regards to the resilience of the Borough to the effects of climate change (e.g. hotter, drier summers, more extreme weather events) the location of development is not likely to be a major influential factor. Development under any of the alternatives could contribute to lower levels of vegetation and an increase in the 'built environment'. Equally, any option could incorporate design features that seek to improve resilience (for example, the expansion of green infrastructure corridors).</p> <p>Where development is greater in magnitude, or more geographically focused (for example alternative 2a), the potential to affect the function of green space in and around urban areas would be more pronounced. Therefore, it may be more likely that negative effects would occur under growth scenario C, and at distributions that focus development into one area such as alternative 2 in the north of the urban area, and alternative 1, within the west (to a lesser extent). Uncertain negative effects are predicted for each of those alternatives.</p>						

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
9. Biodiversity	a. Meet needs	-	✓*	✓*	-	✓*
	b. Needs+	-	n/a	✓**	?*	✓*
	c. Needs ++	n/a	n/a	✓✓**	?*	✓**

Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.

There are five Sites of Special Scientific Interest (SSSI) within the Plan area. The largest of these is the River Blythe SSSI which intersects Solihull from the south-west to the north-east. Development under each of the alternatives could put pressure on the SSSI, though this would be unlikely to occur as a result of a specific development, but more due to cumulative effects of development. The majority of available sites would not be located close to the SSSIs, but a number (under each distribution alternative) would fall within SSSI impact zones, suggesting a need to ensure that development do not have an adverse impact on SSSIs, particularly cumulatively.

At a higher level of growth (Scenarios B and C) growth would be more likely to have effects upon the SSSIs due to the increased land take required and the potential cumulative or direct effects this could have on SSSIs. Alternatives 3b and 3c (in particular) is predicted to have moderate negative effects as the majority of growth would occur along the route of the River Blythe. This option could therefore put a greater amount of pressure on the SSSI. Conversely, larger strategic sites could present better opportunities to enhance biodiversity, and / or provide alternative land for recreation, which would help to relieve pressure on the SSSI from such sources. Green infrastructure and SUDs could also potentially have benefits for the SSSI and local wildlife sites by helping to regulate water quality and hydrology (recorded as positive effects for Alternatives 3a, 3b and 3c).

Local wildlife sites are abundant across Solihull, with a number of site options being intersected by designated and/or potential wildlife sites under each of the distribution alternatives. There is therefore potential for these habitats and species to be affected by development.

Under Alternative 1a, the distribution and scale of growth should be accommodated along transport hubs and corridors without having significant effects on local wildlife sites. A neutral effect is predicted.

The concentration of growth to the north of the Borough under scenario 2a is predicted to have mixed effects. On one hand, it would divert development away from sensitive areas to the south east of the borough. There may also be opportunities to strengthen ecological networks in this area. However, it would lead to development in close proximity to numerous local wildlife sites. This could have negative effects through disturbance and loss of habitat (at least in the short term).

Conversely, the proximity of development sites to existing local wildlife sites could offer opportunities to strengthen networks through the adoption of green infrastructure on site that links to surrounding areas. This would be more difficult to do where there are longer distances from the development sites and existing ecological networks.

For Alternative 4a, 4b and 4c development ought to avoid the most sensitive habitats in the borough; though higher levels of growth in the rural settlements and a new settlements could disturb species and habitats within close proximity to local wildlife sites. However, the effects on the SSSIs would be less prominent. Furthermore, development may present opportunities to strengthen ecological networks if green infrastructure was an integral part of the developments. Overall, a minor negative effect is predicted for 4b and 4c, and uncertain positive effects are recorded to reflect the potential (albeit uncertain) to enhance ecological networks.

Some of the sites likely to come forward under Alternative 5a are strategic in nature, and would offer opportunities to enhance wildlife through green infrastructure enhancement. The spread of development across the borough would also mean that pressure on any particular area was not too great. These are recorded as positive effects for Alternatives 5a, 5b and 5c. However, given that these alternatives are a combination of the other distribution scenarios, the negative effects associated with those are likely to be generated (albeit at a slightly lesser magnitude).

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
10. Landscape	a. Meet needs	✓✗	✓✓✗	✓✗✗	✓✗	✓✗
	b. Needs+	✓✗	n/a	✓✗✗	✓✗✗	✓✗
	c. Needs ++	n/a	n/a	✓✗✗✗	✓✗✗✗	✓✗✗

To manage the landscape effects of development in recognition of the European Landscape Convention as well as the risks and opportunities associated with measures to address climate change.

Development under all of the alternatives will involve the loss of Green Belt, and therefore there will be negative effects on the openness of the countryside and the edge of settlements. The extent of negative effects is predicted to vary dependent upon the distribution and amount of development. At higher levels of growth under Scenarios b and c, the negative effects would be more pronounced for each of the distribution alternatives.

Scenario 1 focuses growth to transport hubs and corridors, which could see the development to the north and south-west along key routes. There would also be some growth from accessible settlements such as Balsall Common, Dorridge and Shirley. Development in these locations could affect the character of settlements, increasing the sense of urban fringe rather than open countryside.

Focusing on the UK Central Hub Area and HS2 interchange (Alternative 2a) would lead to substantial growth to the north / north-east of the Borough. The scale of development required would see the loss of land that currently separates Marston Green/Chelmsley Wood from Birmingham Business Park, and also expansion of the built area south beyond Coventry Road. There would be potential for negative effects in this part of the borough which is recorded as a significant negative effect on the character of the landscape in this area. Conversely, this option would negate the need for development in other locations across the Borough, helping to preserve the character of rural settlements and the 'Arden Pasture' areas to the south-west. This is a positive effect for the borough as a whole, as in the absence of a clear strategy, such land across the Borough could be at risk of development.

Alternative 3 focuses a greater amount of growth at SUEs, which could see substantial development to the south-west in the 'Arden Pasture' character area. For scenario 3a, there would be a need to develop land at the urban fringes of Solihull, some of which has a distinct rural character that would be lost without low density sensitive design. Given the scale of growth required at the urban fringes, it is unlikely that development could be delivered without having at least moderate negative effects. At a higher scale of growth, the negative effects would be exacerbated as the areas would need to be even larger, or of higher density. Therefore Alternative 3b and 3c are predicted to have major negative effects. A positive effect is also predicted for each of Alternatives 3a, 3b and 3c as other parts of the Borough would be better protected from effects upon landscape.

Growth at the fringe of rural settlements and within the countryside (new settlements) is predicted to have significant negative effects at all three levels of growth; with moderate negative effects for 4a and major negative effects at 4b and 4c. Under this scenario, the special character of settlements such as Balsall Common, Hampden in Arden, Dorridge, Knowle and Meriden would be more likely to be eroded (particularly at higher levels of growth). This approach would however offer greater protection to the character of the Arden Parkland to the north of the Borough and also the Arden Farmlands to the South West. This is recorded as a positive effect.

Alternative 5 would see a wider dispersal of development across the Borough, which would somewhat reduce the severity of effects in particular locations. In this respect, the negative effects are only predicted to be minor for Alternatives 5a and 5b. For Alternative 5c, it would be necessary to deliver larger scale urban extensions, growth to the north and at accessible settlements. Whilst still not as substantial as growth would be in these areas under the other alternatives respectively; this presents a more significant negative effect overall. Positive effects are recorded for each alternative 5a, 5b and 5c reflecting the greater potential to avoid negative effects in any one location, as well as delivering lower density development that should be more compatible and sensitive to existing character.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
11. Green Infrastructure	a. Meet needs	✓*	✓	✓*	✓*	✓
	b. Needs+	✓*	n/a	✓✓*	✓**	✓*
	c. Needs ++	n/a	n/a	✓✓**	✓***	✓**

To facilitate the delivery and enhance the quality of areas providing green infrastructure.

The majority of designated parks and open spaces within Solihull exist to the west and the north of the Borough within the urbanised areas. Central areas, and land to the south-west, south and east, are designated as green belt. By definition these areas offer swathes of open green space; though the quality, accessibility and use of this land varies considerably. Development has the potential to affect these areas, whether this be positively or negatively.

Each alternative will lead to a loss of Green Belt land, which may have localised negative implications on green and open space. However, it is presumed that the larger strategic sites (such as SUEs) ought to be able to maintain and enhance elements of green infrastructure (GI). This should be of greater value and more accessible to new and existing residents (Compared to agricultural land for example).

Alternative 1a offers the potential to extend networks of GI along public transport routes and hubs by linking potential development sites. These sites are within the green belt, but also border against the urban area, and as such could offer effective links between settlements and open green space. This also is the case with scenario 2a, where a network of GI could be achieved across the sites should sensitive design be adopted. Negative effects are also predicted, as some communities will consider the loss of the openness and quantity of Green Belt land to be negative. Alternative 1b would deliver a greater amount of growth, including in accessible locations such as Balsall Common and Hampton in Arden. However, the smaller size of sites could make it difficult to establish significant areas of GI.

The strategic nature of SUEs under Alternative 3a present good opportunities for green infrastructure to be delivered within developments. This could be beneficial to new and existing communities at the fringe of the Solihull urban area. At a higher level of growth, opportunities would be increased, with potential to make links between Monkspath and Majors Green. Consequently, a moderate positive effect is predicted. At the highest level of growth (Alternative 3c), the additional development would be on sites that are less well connected to the urban area/settlements; so further positive effects would be less likely. The overall loss of a greater amount of open space / Green Belt is considered to be a moderate negative effect.

Scenario 4a would lead to an expansion of settlements in accessible settlements and other rural settlements; which could help to enhance the open space offering in these areas (i.e. Knowle, Copt Heath and Balsall Common). However, given the necessity to deliver housing need, these sites may not be large enough to accommodate *strategic* GI in their design despite this being a policy objective. Therefore, negative effects could occur in some locations where there is a net loss in the value of green and open space. These effects would be at a greater magnitude for Alternatives 4b and 4c.

A combined approach under Alternative 5a ought to have a positive effect, as it would deliver growth across the borough and potentially secure enhancements to open and green space in such areas (for example at selected SUEs, and the UK Central Hub Area). In other locations (such as smaller site allocations and rural areas), the potential for enhancement would be lower, and therefore, the overall effects are predicted to be a minor positive. In some locations negative effects could occur, as there would be a cumulative loss of open land and space. The effects would be more prominent at higher

levels of growth (5b and 5c).

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
12. Historic environment	a. Meet needs	-	-	*	*	-
	b. Needs+	*	n/a	**	**	*
	c. Needs ++	n/a	n/a	***	***	**

To conserve and enhance the historic environment, heritage assets and their settings.

Listed buildings, ancient monuments and other heritage assets are present across the borough, although concentrations exist in the centre of settlements and along road networks. A significant number of rural assets also exist, and it is sites in proximity to these features which are likely to offer the most potential for enhancement or, alternatively, risk to the historic environment.

Under Alternative 1a, development is not likely to be within close proximity to designated heritage assets, though there could be indirect effects on the setting on heritage assets such as increased traffic. Overall, it ought to be possible to avoid sensitive assets at this level of growth. Therefore a neutral effect is predicted. At a higher level of growth, development could have more noticeable effects on the setting of heritage assets in some settlements, as the extent of development would need to be wider or more intense. There is therefore potential for negative effects upon settlement character, which in some areas (for example Hampden in Arden) could affect Conservation Areas. Therefore a minor negative effect is predicted for 1b.

Growth experienced under Alternative 2a is predicted to have a **neutral effect** on the historic environment given the low number of designated or local heritage assets and features surrounding the proposed Central Hub and HS2 Interchange and associated development sites. The Conservation Area of Bickenhall is nearby, but the settlement is already located in proximity to the airport and as such a developed setting is already established. Given the limited number of heritage features located on potential development sites that would be likely to come forward, there is little opportunity for on-site enhancement of heritage at risk.

Alternatives 3a and 3b, sees the extension of the Solihull urban area, with the potential for negative effects upon the setting of heritage assets (mainly farms, cottages and other associated features). Given that the open, rural feel of these areas contributes to the setting of these heritage features, wide scale development would lead to a loss of character. High quality design could be employed to minimise effects, but a residual negative effect would remain. At higher levels of growth, the effects would be more difficult to mitigate, and a wider area would be affected, and so major negative effects would be generated (3c) At a higher scale of growth, more widespread development would not be likely to instigate a direct loss of assets as such; but the size of development could affect the character of the Borough and the setting of designated heritage assets.

An increased intensity of development at rural locations / new settlements would be likely to affect the character of settlements such as Balsall Common, Dorrige, Knowle, Merdien and Hampden in Arden. Due to the smaller scale of these settlements, substantial growth could have a more prominent effect on the setting of heritage assets, could change the approach into the villages, and alter the rural feel of the settlement fringes. At a lower level of growth, it ought to be possible to avoid the most sensitive locations and so an uncertain negative effect is predicted. However, as the housing need increases under 4b and 4c, there is a need for intensification at the larger, more accessible settlements (i.e. knowle, Balsall Common), but also at smaller settlements such as Hampden in Arden. Therefore more significant effects are predicted for 4b and 4c.

Alternative 5a disperses development, whilst also targeting growth in specific areas such as the HS2/Central Hub. At this level of growth, the effects on heritage assets ought to be minor. Some locations are less sensitive, and a lower growth at other settlements / the Solihull urban fringe would have a less profound effect upon the setting of heritage assets. At a higher level of growth, the need for further site allocations / development would lead to more significant changes to the character of settlements, which could negatively affect the setting of heritage assets, or lead to a loss of heritage assets This is recorded as a moderate negative effect for alternative 5c and a minor effect for 5b.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub Area and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
13. Built environment	a. Meet needs	✓	✓✓	✓	-	✓
	b. Needs+	✓✗	n/a	✓	✗	✓✓
	c. Needs ++	n/a	n/a	✓✗	✗✗	✓✓✗

To deliver improvements in townscape and enhance local distinctiveness.

Development could have mixed effects, depending upon its location, and the sensitivity and quality of design. Each alternative will involve a focus on urban regeneration on brownfield land (as well as green belt release); which is positive for the improvement of the public realm in Solihull. Development also offers the opportunity to enhance the public realm through development contributions.

Development at the urban fringe to Solihull could also help to enhance gateways into the town. However, the urban fringe in smaller rural settlements would be more vulnerable to change.

Scenario 1a offers an opportunity to enhance the entrance into both Solihull and Birmingham (from the M42 along Stratford road and Dog Kennel lane), which is predominantly characterised by housing and employment sites. If sensitively designed, development could create a more distinctive entry point into the urban area, which is a potential positive effect. At a higher level of growth, the extent of the built up areas of land would be greater, which could make it difficult to maintain the character of the urban fringe, and so a potential negative effect is predicted for 1b.

In accessible settlements such as Balsall Common, a modest amount of growth could help to support the vitality of settlements, without having a significant effect upon the identity of the area. However, at higher or denser levels of growth, the character of the built environment could be affected negatively.

Alternative 2a is predicted to have a moderate positive effect on the built environment, as it should offer good opportunities to support regeneration and improvement in the north of the Solihull urban area. A focus on new high quality development around the UK Central Hub Area and HS2 interchange ought to be attractive as it is a prime location for business investment. Therefore, there should be ample opportunities to strengthen the character and function of the built environment and public realm. Though these benefits would not be distributed evenly across the borough, they would be significant in this area.

Alternatives 3a, 3b and 3c present the opportunity to create new communities that have their own character. Providing that developments are well designed, this ought to have positive effects on the urban fringe of Solihull. Conversely, SUEs are likely to expand the physical boundary of the Solihull Urban area, which could be viewed as an irreversible loss of open space to built development. At higher levels of growth, this would become more of an issue, as development would create greater urban sprawl. Therefore, negative effects could arise for alternative 3c.

Should growth be absorbed within rural settlements as with scenario 4, it is likely to be of a scale and density which is disproportionate to what

currently exists. Whilst this may be of a high quality, and could be of an appropriate scale (Alternative 4a), such growth also has the potential to erode the local character. For this reason, alternatives 4b and 4c (in particular) are predicted to incur negative effects.

Alternative 5a ought to achieve the positive effects associated with development around transport hubs, SUEs and accessible settlements, without focusing too much development in any one location that would detract from the character and function of the built environment. Consequently, a minor positive effect is predicted. At a higher level of growth (Alternative 5b) the positive effects would be enhanced, reflecting increased opportunities to improve the public realm and take advantage of investment in the UK Central Hub Area / HS2 broad location. However at a higher level of growth (5c) negative effects are predicted to reflect the potential for greater urban sprawl, and the need for more development in rural settlements; which are likely to be more sensitive to large scale development.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
14. Pollution	a. Meet needs	✓/✗	✓/✗✗	-	✗	-
	b. Needs+	✓/✗	n/a	✗	✗	-
	c. Needs ++	n/a	n/a	✗✗	✗✗	✗

Minimise air, soil, water, light and noise pollution.

Growth is likely to contribute to increased pollution during the construction phase of development, and potentially for the long term depending on what management is adopted to control pollution/emissions. It could therefore be assumed that growth from scenario a (Meet Needs) to c (Needs ++) would incur increasingly negative effects. However, site location is considered to be influential in the extent of pollution.

For example, Alternative 1a, which focuses development around established transport corridors, could exacerbate pollution problems in areas which are already suffering (particularly noise and air), which is a negative effect. Concentration in these locations ought to lead to an overall decrease in emissions as a greater proportion of new development would have good access to public transport corridors and service hubs. This alternative is therefore likely to have mixed effects. At a higher level of growth (1b), this pattern of distribution would reinforce the effects predicted under alternative 1; though a significant difference in effects is not likely.

Focusing development to the key areas of growth and regeneration to the north of Solihull (2a) is predicted to add to existing noise, air and soil pollution. A greater number of homes would be close to the airport and industrial areas under this scenario compared to a more dispersed approach. Therefore, the potential for effects on existing and new communities would be present. A moderate negative effect is predicted to reflect these issues. Conversely, other parts of the Borough would be under less pressure from new development, helping to ensure that noise, light and air pollution do not cause significant effects for the majority of settlements. Despite localised exacerbation of noise, air, water and soil pollution, this could therefore be considered a **positive** allocation when considering Solihull as a whole.

A focus on SUEs will lead to more substantial growth around the urban edges of Solihull. In terms of noise, light and amenity issues, strategic growth sites ought to be able to accommodate development without having significant effects upon existing or new communities. In terms of air quality, large scale growth on the urban edge of Solihull could contribute to additional vehicle trips along main routes, which might exacerbate issues in the urban areas. However, the SUEs could include infrastructure upgrades to help alleviate congestion. At lower scale of growth (3a), the choice of sites would be wider, and it may be possible to disperse development at several SUEs, therefore the effects are predicted to be neutral.

At higher scales of growth (3b and 3c), development would need to be higher density or cover a wider range of sites adjacent to the urban areas. This would have potential for negative effects on congestion (air quality, and amenity may be affected (3c).

A focus on rural settlements has the potential to affect amenity for existing communities - as a result of increased traffic and noise, light pollution in 'rural areas', and expansion of settlement boundaries. At lower levels of growth (4a) the effects are predicted to be minor as the level of development ought to allow controlled growth at rural settlements across the Borough. At higher levels of growth (4c), there would be a need for increased expansion or higher density development, both of which could have negative effects upon levels of traffic, noise and light pollution in 'rural areas'.

Alternative 5 involves a combination of approaches, dispersing growth across the Borough, but also taking advantage of specific opportunities such as the Central Hub and SUEs. This ought to ensure that pollution is not concentrated too heavily into one part of the Borough. Though there could still be negative effects due to the scale of growth, this is only likely to be an issue for alternative 5c which would require a more intense growth in particular locations.

SA Objective		1. Focus on Public Transport corridors and hubs	2. Focus on UK Central Hub and HS2 Interchange	3. Focus on Sustainable Urban Extensions	4. Focus on New Settlements, and significant expansion of Rural Settlements	5. Combination of SUEs, Central Hub and HS2, and accessible settlements
15. Social inclusion	a. Meet needs	✓	✓✓	✓	✓	✓
	b. Needs+	✓✓	n/a	✓✓	✓✓	✓✓✓
	c. Needs ++	n/a	n/a	✓✓✓	✓✓✓✗	✓✓✓

Reduce social exclusion and disparities within the Borough

Although Solihull is a broadly affluent, the Borough is relatively polarised. There are pockets of deprivation with some LSOAs (to the north in particular) being within the most deprived 10% of the country. Deprived LSOAs in the North Solihull regeneration area also suffer higher population density, a greater proportion of socially rented housing, and in some areas less green space per head compared to the rest of the Borough. Deprivation in the North Solihull regeneration is linked to (and affected by) educational attainment, employment, crime and health.

Each of the alternatives include development within the Solihull urban area, which ought to be positive in terms of providing access to affordable housing for residents in these areas. Development could also bring with it improvements to open space provision and community infrastructure. Alternative 2a is predicted to have the most positive effect upon the north Solihull area, as it would support the greatest amount of growth in this area, helping to provide homes and jobs in areas of need. Likewise, alternative 5 would have positive effects as this also includes an element of growth associated with the UK Central Hub Area (though to a lesser extent than alternative 2). Alternative 1 is also predicted to have a positive effect, as it would locate development in areas with good access to public transport, which includes parts of the Solihull urban area and North Solihull. Alternatives 3 and 4 are predicted to have only minor positive effects, as growth would largely be at large urban extensions / expansion of rural settlements. Whilst this would be positive in terms of tackling affordable housing across the borough, the spread of development is less likely to benefit communities in greatest need.

Under growth scenario A (meet local needs only), all distribution alternatives (apart from 2a) are predicted to have a minor positive effect. Whilst each option meets local needs, there would be an element of unmet needs from the City, and this would be likely to affect the urban area of Solihull. Therefore the positive effects on tackling deprivation may not be fully realised. Although alternative 2a would not fully meet needs across the borough, it would deliver a substantial amount of housing and employment in areas of need, which ought to have moderate positive effects in terms of reducing disparities. At a higher level of growth (Scenario B), the positive effects are more pronounced for each distribution alternative, as an element of housing needs from the City would be catered for. This ought to reduce competition for housing in the urban area in particular, with greater choice throughout the borough. A major positive effect is predicted for alternative 5b at this level of growth, as it would provide a good spread of housing and employment opportunities to meet the various needs of communities across the borough. This would help to reduce exclusion in North Solihull, whilst also supporting the vitality of rural settlements.

At further levels of growth still under Growth Scenario C, the need to deliver social infrastructure improvements would increase. This could see a need for more schools and health care facilities. Alternative 3c is predicted to have a major positive effect, as facilities could be delivered as part of a large urban extension. Alternatives 4c and 5c disperse development and pressures on services might be more difficult in 'rural' settlements, as reflected by a minor negative effect for Alternative 4(c).

SA Objective		1. Focus on Public Transport corridors and hubs	2. Focus on UK Central Hub and HS2 Interchange	3. Focus on Urban Extensions	4. Focus on New Settlements, and significant expansion of Rural Settlements	5. Combination of SUEs, Central Hub and HS2, and accessible settlements
16. Housing	a. Meet needs	✓	✓	✓	✓	✓
	b. Needs+	✓✓	n/a	✓✓	✓	✓✓
	c. Needs ++	n/a	n/a	✓✓?	✓✓?	✓✓✓

Improve the supply and affordability of housing (particularly in the areas of greatest need)

There is a clear need to meet housing needs in the borough, particularly addressing issues of affordability. Under growth scenario A, it is likely that local needs will be met for each distribution alternative. However, there would be pressure from household need not being met in Birmingham. This could limit the positive effects for Solihull, particularly in areas of need such as the urban area and North Solihull regeneration area.

There are substantial housing needs in the North Solihull area, which makes alternative 2 and (to a lesser extent) 1 and 4 most likely to tackle needs where they are most pronounced (provided that development promotes market housing in areas of current social housing to facilitate mixing of communities). Alternative 2 is predicted to have a positive effect given its focus on sites that would help to meet needs in North Solihull. However, it would not help to meet needs in other locations, so the positive effects are only minor.

At higher levels of growth under scenario B, local housing needs would be met as well as accounting for an additional ~2000 dwellings to help meet Birmingham’s unmet needs. This is positive with regards to housing supply, as it helps to relieve pressure from outside the borough for housing. In terms of distribution, alternatives 1b and 5b are predicted to have moderate positive effects as they would make better provision for communities of need, as well as providing a wider spread of housing to meet needs across the borough.

Alternatives 3 and 4 concentrate housing onto new settlements and rural areas, which could help create new communities. Whilst these are positive effects, they do not address issues in areas of need as much as alternatives 1b, 2a and 5b.

At the higher growth scenario C, there would be a greater amount of housing needs from Birmingham met. This would contribute to a major positive effect for each alternative. However, the effects are most positive for alternative 5c, which would still include a greater focus on the UK Central Hub Area / HS2 Interchange and accessible communities (including the north of Solihull). Alternatives 3c and 4c would have moderate positive effects as it is unclear whether the creation or expansion of rural communities would benefit those of greatest need living in the urban area.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
17. Health	a. Meet needs	✓	✓	✓	✓	✓
	b. Needs+	✓✓?	n/a	✓✓	✓?	✓✓?
	c. Needs ++	n/a	n/a	✓✓✓	✓✓x	✓✓✓x

To fully integrate the planning, transport, housing, cultural, recreational, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles.

Generally, each alternative is predicted to have some positive effects on health and wellbeing through the delivery of housing to help meet the Borough’s housing needs; and increase opportunities to deliver health facilities using development contributions.

Growth scenario A is predicted to have the least positive effects, as the level of growth would not meet any housing needs from the Birmingham area. This could mean that demand for housing in the urban parts of Solihull remains high. Therefore, only minor positive effects are predicted for 1a, 2a, 3a, 4a and 5a. At higher levels of growth, the positive effects of housing on health would be of a greater magnitude, as there would also be an allowance for unmet needs from Birmingham. This would reduce ‘competition’ for housing and make it more likely that communities have access to a home.

The location of housing could also have effects upon the extent of effects on health and wellbeing. For example, deprivation levels are significantly higher in the north of the Borough which contains areas that fall into the most deprived 5% of neighbourhoods in the Country. Typically the more deprived an area; there will be low skill levels and high unemployment and crime. Access to affordable quality housing can also be a major barrier to good health. Development that helps to tackle these inequalities would have a positive outcome on health.

Alternatives 1a, 1b, 2a, 5a, 5b and 5c could be expected to support considerable investment in areas of need but there is potential for such a focused approach to perpetuate inequalities (should jobs and housing not be accessible to communities) or overwhelm services (without creating the thresholds to deliver new facilities), which is a potential negative effect for 1b, 4b and 5b.

Alternatives that involve a more dispersed form of growth ought to ensure that the needs of rural areas are also taken into account, which is a feature of alternatives 4a, 4b and 4-c and 5a, 5b and 5c. However, alternative 4 would be less likely to take advantage of opportunities to help regenerate areas of need as it focuses entirely on rural and new settlements.

Alternative 1a which focuses development around established transport corridors, would be most likely to improve accessibility for those who do not have access to a private motor vehicle and also encourage others to use public transport rather than relying on their cars. This would help to contribute to a moderate positive effect overall. Under 1b, similar benefits would be generated, but growth may also support new community facilities

in settlements such as Hampton in Arden and Balsall Common, and so a moderate positive effect is predicted.

Development under scenario 4 focuses growth to rural centres, where typically there is less accessibility to jobs and services. However, at higher levels of growth (4c) there may be potential for new facilities to be supported, which would have positive effects for rural communities. Conversely, this approach would not help as much to address problems with accessibility to jobs, nor would it focus at all on areas in need of regeneration.

A focus on SUEs ought to have mostly positive effects, as new developments ought to be within close enough proximity to areas of need to exert a positive effect with regards to housing choice, and improved access to new facilities (which are more likely to be a feature of strategically planned urban extensions). The effects are predicted to be more significant at higher levels of growth.

The Borough has a high density of voluntary and community sports clubs, and a range of sports facilities. There are more than 20 gyms and private health clubs within five miles of the town centre, 280 local providers of sport and active recreation and 10 golf courses and driving ranges. Access to these facilities is reasonable for most, though a greater range of facilities exists to the south of the borough. In terms of support for active lifestyles (including travel), each alternative could help to support an improvement in walking and cycling and public transport links. However, alternative 1 is perhaps best placed to achieve more positive effects in this respect.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements, and significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
18. Crime	a. Meet needs	✓?	✓?	✓x	?	✓
	b. Needs+	✓?	n/a	✓x	?	✓
	c. Needs ++	n/a	n/a	✓✓x	x	✓x

Reduce crime, fear of crime and anti-social behaviour

The opportunity for criminal and anti-social activity can be controlled to an extent by good design, but this should not be affected by the broad distribution of growth. Therefore, differences between the alternatives have not been established in this respect.

Rates of crime are fairly low across the Borough as a whole, but there are hotspots of crime to the north, west and in urban centres. Growth in these areas might lead to increased opportunities for acquisitive crime, by locating development close to areas that are already a target. Development that correlates with key routes into Solihull centre may also present increased opportunities for crime, as these routes are used typically used by offenders. In this respect, Alternatives 1 and 2 may have potential for negative effects.

Having a job or access to training, and accommodation within affordable good quality housing is known to have a positive effect in terms of reducing rates of offending and reoffending. Therefore, growth that helps to reduce deprivation / inequalities ought to be positive in terms of crime reduction. In this respect, Alternatives 1 and 2 ought to be positive, as they seek to support growth in accessible locations which should benefit deprived communities.

Alternative 3a would lead to the expansion of the urban edge of Solihull. The communities would not be expected to generate particular concentrations of crime. Access to housing should also help to reduce potential offending. Given that SUEs are likely to involve strategic levels of growth there is greater potential for new community facilities to be delivered as part of development. This could help to provide activities that help to divert potential offenders such as better recreational facilities for youths. The potential for delivering new facilities would likely be greater with a larger scale of growth (i.e. to trigger the need for new facilities), so a moderate positive effect is predicted for Alternative 3c.

There are fewer instances of crime within the rural areas / centres compared to Solihull urban area. Expansion of these settlements could be expected to follow existing trends, or could lead to a greater potential for crime should the centres become busier. A negative effect is predicted at a higher level of growth under 4c to reflect these effects. At lower levels of growth, effects are unlikely to be significant, but there is a degree of uncertainty. A focus on new and rural settlements is also less likely to help reduce crime levels in areas which are currently high (i.e. the Solihull urban area).

The approach to development under Alternatives 5a, 5b and 5c ought to bring about positive effects in areas that could benefit from regeneration, as well as spreading development sufficiently to avoid negative effects upon levels of crime due to busier centres. Overall, the balanced approach is likely to be positive for Alternatives 5a and 5b, with potential negative effects occurring under 5c due to the higher scale of growth.

SA Objective		1) Focus on Public Transport corridors and hubs	2) Focus on UK Central Hub and HS2 Interchange	3) Focus on Urban Extensions	4) Focus on New Settlements & significant expansion of Rural Settlements	5) Combination of SUEs, Central Hub and HS2, and accessible settlements
19. Accessibility	a. Meet needs	✓✓	✓✓*	✓	✓*	✓✓
	b. Needs+	✓✓	n/a	✓	✓*	✓✓
	c. Needs ++	n/a	n/a	✓*	✓**	✓

Encourage development with a better balance between jobs, housing and services, and provide easy and equitable access to opportunities, basic services and amenities for all.

Alternatives 1a and 1b locate development in areas that are most accessible by public transport, which should help to achieve a good balance between jobs, housing and services. Development along transport corridors and hubs would broadly be in locations that have a good range of local services and facilities, which would ensure that new development is accessible, and makes good use of existing infrastructure. A moderate positive effect is predicted for both alternatives. Under 1b, a greater amount of development would need to be located in accessible settlements, which would help to support the vitality of these areas. However, local access to jobs and services would not be as good as those within the Solihull urban area.

Alternative 2a focuses development into areas that have good access to strategic employment opportunities, strong links to the town centre and the strategic road network. Development ought to be accessible by public transport, and opportunities should be equally accessible to people with or without a car. A moderate positive effect is predicted to reflect these factors. A minor negative effect is predicted as this approach would not address accessibility issues that occur in other parts of the Borough. In particular, this alternative would not help to support the improvement of community infrastructure in rural settlements (which could benefit from investment), which could be viewed as a missed opportunity.

Growth of urban extensions could have mixed effects. On one hand, the majority of growth would be located on the urban fringe of Solihull and ought to have good access to services and jobs, provided that public transport routes were expanded into these new developments. The spread of development would also offer some proportional growth across the Borough in various other locations. The strategic nature of development would also allow for new services to be created that would benefit new and existing communities. At higher levels of growth under 3c, some growth could potentially be more isolated, and less well-integrated with existing transport networks, which is recorded as a minor negative.

Development in rural or new settlements (Alternatives 4a, 4b, 4c) would help to support the growth and enhancement of such settlements across the Borough, which is a minor positive effect. However, these alternatives would locate the majority of growth away from new job opportunities in the Solihull urban area and the UK Central Hub Area / HS2 interchange. This is a missed opportunity, and could lead to some inequality of accessibility, as these sites would be easier to reach from some settlements by car rather than public transport. Therefore a minor negative effect is predicted for 4a and 4b. At higher levels of growth under 4c, the amount of growth directed to such areas would increase, which would see a moderate negative effect.

Alternative 5a, 5b and 5c are predicted to have positive effects. The spread of development ought to ensure that strategic job opportunities are directly accessible to communities with poor access to a private car (i.e. growth to the north, and at accessible locations). The spread of development would also support appropriate levels of growth in accessible settlements across the borough, which would be beneficial for these communities. The inclusion of particular SUEs would also help to create accessible new communities, with the potential for enhancements to transport networks. On balance, a

moderate positive effect is predicted, as this approach takes advantage of growth opportunities such as HS2 / UK Central Hub Area, whilst also ensuring that growth (and possible enhancement of services and infrastructure) occurs elsewhere across the borough in accessible locations. At the highest level of growth, the additional development may not be located in the most accessible locations, as these would presumably already be allocated. Overall, the effect at this level of growth is therefore a minor positive.

Summary of appraisal findings

Distribution	Growth	Regeneration	Employment	Transport	Resource efficiency	Greenhouse gases	Resilience to climate change	Flooding	Climate change adaptation	Biodiversity	Landscape	Green infrastructure	Historic Environment	Built environment	Pollution	Social inclusion	Housing	Health	Crime	Accessibility
1) Focus on Public Transport corridors and hubs	a) Needs	✓	✓	✓	-	-	?	-	-	-	✓ x	✓ x	-	✓	✓ x	✓	✓	✓	✓?	✓✓
	b) Needs+	✓✓	✓	✓✓	x	x	?	x	?	-	✓ x	✓ x	x	✓ x	✓ x	✓✓	✓✓	✓✓?	✓?	✓✓
2) Focus on UK Central Hub and HS2 Interchange	a) Needs	✓✓	✓	✓✓ x	-	?	?	?	?	✓ x	✓✓ x	✓	-	✓✓	✓ xx	✓✓	✓	✓	✓?	✓✓ x
	b) Needs+	-	✓	✓	-	-	?	-	-	✓ x	✓ xx	✓ x	x	✓	-	✓	✓	✓	✓	✓
3) Focus on Urban Extensions	b) Needs+	✓	✓	✓✓ x	x	?	?	?	-	✓ xx	✓ xx	✓✓ x	xx	✓	x	✓✓	✓	✓✓	✓	✓
	c) Needs++	✓✓ x	✓	✓✓ xx	xx	?	?	x	?	✓✓ xx	✓ xxx	✓✓ xx	xxx	✓ x	xx	✓✓✓	✓✓?	✓✓✓	✓✓	✓
	a) Needs	-	✓	x	-	-	?	-	-	-	✓ x	✓ x	x	-	x	✓	✓	✓	?	✓ x
4) Focus on New Settlements, and significant expansion of Rural Settlements	b) Needs+	✓	✓	✓ x	x	x	?	?	-	?	✓ xx	✓ xx	xx	x	x	✓✓	✓	✓?	?	✓ x
	c) Needs++	✓✓ x	✓	✓ xx	xx?	x	?	x	?	?	✓ xxx	✓ xxx	xxx	xx	xx	✓✓ x	✓✓?	✓✓ x	x	✓ xx
	a) Needs	✓	✓	✓	-	-	?	-	-	✓ x	✓ x	✓	-	✓	-	✓	✓	✓	✓	✓✓
5) Combination of SUEs, Central Hub and HS2, and accessible settlements	b) Needs+	✓✓	✓	✓	x	?	?	?	-	✓ x	✓ x	✓ x	x	✓✓	-	✓✓✓	✓✓	✓✓?	✓	✓✓
	c) Needs++	✓✓✓ x	✓	✓ x	xx	?	?	x	?	✓ xx	✓ xx	✓ xx	xx	✓✓ x	x	✓✓✓	✓✓✓	✓✓✓ x	✓	✓
	a) Needs	✓	✓	✓	-	-	?	-	-	✓ x	✓ x	✓	-	✓	-	✓	✓	✓	✓	✓✓

Discussion

Growth scenario A

Alternative 2a is predicted to have the most positive outcomes for the regeneration, employment and transport objectives, which reflects the focus upon the strategic priorities the UK Central Hub and the HS2. Alternatives 1a and 5a are also predicted to have positive effects on these areas, but at a lesser magnitude. Alternative 3 is predicted to have positive effects too for employment and transport, though would be less beneficial for regeneration. Alternative 4a performs the least positively, with a minor negative effect associated with transport, due to the more dispersed nature of development.

At this level of growth each of the distribution options perform fairly similarly under the resource use and environmental protection topics. There are mostly neutral effects on climate change mitigation, resilience and flooding. The effects upon biodiversity, green infrastructure and landscape are also similar for each distribution option, with option 3 performing the least positively due to significant effects upon landscape.

With regards to the built and historic environment, the alternatives perform differently with neutral and positive effects for alternatives 1A, 2A and 5a, and negative effects for 3a and 4a due to the potential to affect the character of urban fringes and the setting of heritage assets. Again, alternative 2a performs slightly better than the other alternatives with a moderate positive effect on the built environment. Having said this, alternative 2a performs the worst in relation to pollution, as it directs development to a focused geographical area, some of which is sensitive to noise, and congestion.

All five distribution options perform positively under the sustainable communities theme, with benefits for housing, health, social inclusion and accessibility across all five alternatives.

On balance, alternatives 2a and 5a are considered to perform the most favourable across the SA framework at this level of growth.

Growth Scenario B

Each of the alternatives perform broadly positively in terms of regeneration, employment and transport. At this level of growth though there are negative effects on transport for alternative 3b and 4b due to increased need for travel and / or traffic. The positive effects are most pronounced for 1b and 5b which focus on accessible locations,

At this level of growth each of the distribution options perform fairly similarly under the resource use and environmental protection topics. There are minor negative effects on greenhouse gases and resource use, attributable to a higher overall level of growth. Flooding presents an uncertain negative effect for 3b, 4b and 5b, with a minor negative for 1b, due to the need for increased release of land, some of which falls in close proximity to flood zones 2 and 3.

The alternatives have mixed effects upon biodiversity and green infrastructure, with negative effects predicted to represent an increased loss or disturbance of local wildlife sites and Green Belt. Positive effects are predicted though to reflect the potential for GI enhancement, Alternatives 1b and 5b are predicted to have minor positive and negative effects, but the effects for 3b and 4b are more pronounced, Whilst these alternatives have moderate negative effects, there is more scope for strategic green infrastructure improvement for 3b,

With regards to landscape and heritage, the picture is similar, with alternatives 3b and 4b having the most negative effects (moderate) compared to 1b and 5b (minor). Each alternative does have a minor positive effect though for landscape, to reflect the potential for enhancement or the avoidance of other sensitive parts of the Borough.

For the communities theme, each alternative performs broadly positively, with effects ranging from moderate to major positive for housing and health. Alternative 5b performs the most positively, reflecting the more balanced approach to growth, which ought to meet needs across the borough and contribute to improved health outcomes for a wider range of communities.

On balance, at this scale of growth, alternative 5b performs slightly better than alternative 1b. Both 3b and 4b generate a number of more prominent negative effects, and are therefore less favourable. Having said this, option 3 presents the greater opportunities for mitigation and enhancement.

Growth Scenario C

At this scale of growth, the effects are exacerbated, with moderate to major positive effects on regeneration, employment and transport. At this level of growth though, the effects on travel / transport become moderately negative for 3c and 4c and minor negative for 5c, Alternative 5c performs the most favourable with regards to regeneration, as it takes a more balanced approach to growth.

This scale of growth sees a more negative effect upon greenhouse gases and resource use across each alternative. There are also even greater negative effects upon environmental factors including biodiversity, landscape and heritage.

Overall, all three alternatives at this scale of growth present the potential for negative effects upon environmental factors which outweigh the slight improvement in performance against regeneration, economic growth and social progress (improved housing and health outcomes).

APPENDIX C: Site appraisal proformas

