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Solihull Local Plan Review

Pre-submission

Sustainability Appraisal: SA Report

September 2020

Quality information

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Acronyms

BVM	Best and most versatile land
GBHMA	Greater Birmingham Housing Market Area Strategic Growth Study
GBSLEP	Greater Birmingham and Solihull Local Enterprise Partnership
GHG	Greenhouse Gas
HMA	Housing Market Area
LNR	Local Nature Reserve
SA	Sustainability Appraisal
SEA	Strategic Environmental Assessment
SSSI	Site of Special Scientific Interest

Part 1: Background to the Sustainability Appraisal

1. Introduction

1.1 Background

What is the purpose of this Report?

1.1.1 Solihull Council is undertaking a review of its Local Plan. 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.

1.1.2 Local Development Documents (such as this Plan Review) 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).

1.1.3 This document is the Sustainability Appraisal Report (SA Report) that accompanies the Local Plan Review (2020)

1.1.4 The SA Report is made available for consultation alongside the Local Plan so that stakeholders can view the findings prior to the Local Plan being finalised for Submission to the Secretary of State (for Examination).

1.1.5 In summary this SA Report assesses and presents findings in relation to the following key factors:

- An updated Spatial Strategy (and reasonable alternative options).
- Site allocations (and reasonable alternative options)
- Supporting plan policies
- Potential for mitigation and enhancement.

Current stage of plan making

1.1.6 At the current stage of plan-making, the Council is consulting on the Pre-Submission Local Plan Review (2020). Following this the Council will finalise the Plan for Submission.

1.1.7 The current consultation follows several previous consultations on 'Scope, Issues and Options' for the Local Plan Review in November 2015[1], consultation on a draft Local Plan, which was undertaken in December 2016[2], and a Supplementary Consultation to Draft Local Plan Review (2019)[3].

1.1.8 The aim of the Scope, Issues and Options consultation was to canvass stakeholders' views on the policies to be significantly amended or replaced in the Local Plan Review, on the level of growth proposed and the distribution of growth (Growth Options A-G).

1.1.9 In December 2016 the Council then consulted on an initial version of the draft Local Plan. This was with a view to gaining consultees' views on the Council's preferred option for accommodating managed growth in a sustainable manner. It provided additional detail on the level of growth proposed and the distribution of growth (Growth Options A-G).

1.1.10 A further supplementary consultation was subsequently undertaken. This supplementary (non-statutory) consultation sought views on potential additional and/or alternative sites to those in the Draft Local Plan consultation, called 'Amber Sites'; reviewed the housing figures, taking into account the standard methodology for assessing local housing need (LHN); and published more detailed Site Assessments for the Call for Sites. At this stage further work was undertaken in the SA in relation to sites and spatial strategy options

1.1.11 Further plan-making work has since been undertaken, including the consideration of additional strategic growth options, broad locations for growth and individual site options. The findings relating to these elements are presented within this SA Report.

[1] Solihull Metropolitan Borough Council (November 2015) *Solihull Local Plan Review Scope, Issues and Options Consultation*
[2] Solihull Metropolitan Borough Council (November 2016) *Solihull Local Plan Review, Draft Local Plan Consultation*
[3] Solihull Metropolitan Borough Council (January 2019) *Solihull Local Plan Review, Draft Local Plan Supplementary Consultation*

What is the plan seeking to achieve?

1.1.12 The vision and objectives for the Local Plan were developed during initial stages of plan making.

1.1.13 The vision for the Local Plan is as follows:

By 2033, Solihull will have built on its distinct reputation as an attractive and aspirational place to live, learn, invest, work and play. It will have taken advantage of the unique opportunity to maximise the economic and social benefits of the High Speed 2 rail link and interchange both for the Borough and wider area; reflecting the Borough's location at the heart of the national rail and motorway network. In particular the opportunity will have been taken to ensure that the HS2 Interchange is well integrated to the Borough's green infrastructure and key economic assets, including Birmingham Airport, the NEC and JLR to ensure they, and others, can capitalise on this potential. The Borough will play a part in meeting, in a sustainable manner, the needs of its housing market area so that its residents have access to a range and choice of quality accommodation. The Borough will retain its sense of identity, both in its urban and rural area (including appropriate protection of the Green Belt); and the quality of the environment that make it a special place.

This vision will contribute towards the ability for everyone to have an equal chance to be healthier, happier, safer and prosperous, through managed growth.

1.1.14 Implementing this vision, the Local Plan has the following objectives:

Reducing Inequalities in the Borough

Close the gap of inequality between the most and least affluent wards in Solihull, particularly reducing the inequalities that exist between North Solihull Regeneration Area and the rest of the Borough.

Meeting housing needs across the Borough

To ensure that the full objectively assessed housing need for the Borough is met for the plan period consistent with the achievement of sustainable development and the other objectives of the Plan.

To ensure that provision is made for an appropriate proportion of the HMA shortfall in new housing land consistent with the achievement of sustainable development and the other objectives of the Plan.

To help newly forming households and young people to get on the housing ladder through the development of more open market 'starter homes' and shared ownership.

Maximise the provision of affordable housing; ensuring the provision of an appropriate mix, type and tenure of housing on sites in a range of locations which meet the needs of Solihull residents, particularly needs for affordable housing, including social rented, low cost home ownership and supported housing, on a Borough wide basis.

Maximise the supply of affordable housing including delivering more affordable housing through windfall development and prioritising locations for development that will best contribute to building sustainable, linked, mixed use and balanced communities.

Widen the range of options for older people and for people with learning, physical and sensory disabilities and mental health needs through the provision of accommodation which is designed to meet these diverse needs.

To provide opportunities for self and custom build as signalled through Solihull's Self and Custom House Building Register.

Sustaining the attractiveness of the Borough for people who live, work and invest in Solihull

Ensure high quality design and development which integrates with its surroundings and creates safer, inclusive, adaptable and sustainable places which make a positive contribution to the Borough's sense of place, attractiveness and to people's quality of life.

Conserve and enhance the qualities of the built, natural and historic environment that contribute to character and local distinctiveness and the attractiveness of the mature residential suburbs and the rural area.

Ensure development does not have an adverse impact on residential and other amenities, and where that impact is unavoidable, to incorporate satisfactory mitigation.

Promote the sustainability of the rural areas through infrastructure investment, including broadband.

Widen the range of options for older people and those with disabilities through provision of accommodation which is designed to meet these diverse needs.

Provide cycle ways and wildlife to provide sustainable connectivity between communities, transport hubs and public open spaces.

Enhance the Borough's cultural & visitor attractions. Maximise the potential of the 2022 Commonwealth Games to encourage visitors to Solihull

Securing sustainable economic growth

Maximise the capacity and benefits of the recently extended runway at Birmingham airport, including through enhancing the passenger experience.

Support the continued success of other key economic assets such as National Exhibition Centre, Birmingham and Blythe Valley Business Parks and Jaguar Land Rover whilst maintaining the quality of the environment and managing congestion.

Support smaller businesses and employers in the Borough

Support the continued success of Solihull Town Centre whilst maintaining the quality of its environment and managing congestion.

Encourage investment into Shirley and Chelmsley Wood Town Centres to improve competitiveness and the shopping environment and support long term sustainability.

Revitalising town and local centres to meet the emerging challenges of Post COVID Britain, including their role as destinations for retail and leisure

Protecting key gaps between urban areas and settlements

Maintain the Green Belt and improve the network of green infrastructure in Solihull, to prevent unrestricted expansion of the major urban area, to safeguard the key gaps between settlements such as the Meriden Gap and the countryside. Ensure that the countryside is managed so as to deliver a range of benefits including the growing of food and energy products, create an attractive rural setting and improved public access and recreational opportunities.

Climate change

To address the Council's Climate Change declaration of October 2019:

Reduce the Borough's net carbon emissions, and make a full contribution to the national, sub-regional and local targets for reduction – including to be at net-zero emissions by 2041.

Provision of low carbon infrastructure (Green Gas, local Power networks, EV charging)

Promote decentralised energy and heating networks within the Mature Suburbs and North Solihull area, and the generation of energy from on-site renewable sources.

Support the implementation of 'Solihull Connected' and increase mode shift to public transport and active travel by ensuring that new development is located in areas of high accessibility or potential high accessibility.

Implement measures, such as integrated green infrastructure, to improve resilience of existing and new developments to the impacts of climate change.

Implement measures to improve the alternatives to car travel.

Promote public transport access to Birmingham International station and low carbon surface movement strategy to the Airport

To maintain a supply of gypsy and traveller sites

To ensure adequate provision of authorised pitches to meet the needs of Gypsies and Travellers in the Borough, to reduce the number of unauthorised developments and encampments and enable Gypsies and Travellers to access the services and facilities to meet their needs, whilst respecting the interests of the settled community.

Increasing accessibility and encouraging sustainable travel

Improve accessibility and ease of movement for all users to services, facilities, jobs and green infrastructure, including the rural area.

Reduce the need to travel.

Manage transport demand and reduce car reliance.

Enable and increase the modal share of all forms of sustainable transport including the ability to use different modes (e.g. train & cycle) for one journey.

De-couple economic growth and increase in car use.

Concentrate development in areas with high existing, or potential for improved public transport access, and of critical mass to support the long term viability of public transport provision.

Increase the amount of EV charging points.

Providing sufficient waste management facilities and providing for sand and gravel aggregates

To promote the management of waste arising in the Borough further up the waste hierarchy and its treatment as a resource to be used wherever possible.

To address the identified needs for waste management in the Borough.

To provide for primary sand and gravel resources within the Borough to meet Solihull's contribution to the requirement identified in the West Midlands Metropolitan Area Local Aggregates Assessment

including the maintenance of a minimum 7 year landbank, whilst ensuring that provision is made to encourage the use of secondary and recycled aggregates, that sand and gravel resources are safeguarded from possible sterilisation by non-mineral development, and that environmental, restoration and aftercare criteria are met.

Improving health and wellbeing for everyone

Promote development that contributes to a healthy and safe population by providing for opportunities to enable people to pursue an active lifestyle increase participation in physical activity including play, sport and recreation *and make healthier choices.*

Meet local housing and employment needs whilst facilitating the provision of appropriate health care services to create healthier safer communities.

Ensure development promotes positive outcomes for physical and mental health and wellbeing through its location, layout and design, inclusion of appropriate levels of open space, sporting facilities, safe cycling routes *and the protection and improvement of air quality.*

Protecting and enhancing our natural assets

Increase and enhance Solihull's natural environment.

Promote an ecosystem approach to biodiversity conservation aimed at:

Halting and reversing decline and loss by conserving, enhancing and increasing the cover and connectivity of biodiversity and habitats of value. Contributing to local and sub-regional initiatives to improve the natural environment, such as Nature Recovery Networks and the Natural Capital Investment Strategy

Integrate green infrastructure and biodiversity net gain within development and avert fragmentation with the wider ecological network

Reviewing and updating biodiversity information and the network of local wildlife and geological sites.

Addressing gaps in the strategic ecological network to support wildlife and green infrastructure.

Promote a landscape scale approach to protecting and restoring the landscape of the Borough and its characteristic features.

Water quality and flood risk

To contribute towards improving the quality of the water environment by ensuring that the Plan's policies and land allocations help to protect and improve the quality of the main water bodies in the Borough.

To minimise the risk of flooding by avoiding development in high risk areas wherever possible, by applying the flood risk sequential test reducing flows to rivers by restricting surface water discharge rates during periods of high intensity rainfall, and ensuring that new development is designed so as to minimise surface water flooding risks.

Maximising the economic and social benefits of the High Speed 2 rail link and the UKC Hub Area

To provide an appropriate planning framework so as to ensure that the potential economic and social benefits of growth enabled by the HS2 rail link and interchange station are delivered.

That the Hub becomes globally renowned as the best connected business, leisure and entertainment destination in Europe and a major driver of the UK economy

Ensuring that the HS2 Interchange prioritises access by bus, cycle, Metro, SPRINT bus rapid transit network, or the Coventry Ultra-Light Rail system rather than the private car.

Promote cross-boundary connectivity to HS2 from the wider sub-region and key destinations to maximise opportunities for the Midlands Engine for Growth and reduce the need to travel by car.

Creation of a sense of place that draws upon a modern interpretation of 'garden village' principles.

Mitigating the impacts of High Speed 2 and the growth associated with the UKC Hub area

To maximise the opportunities of HS2:

Develop a strategy to mitigate the impacts of increased road traffic to/from Birmingham Interchange including public transport provision, junction schemes and environmental measures required.

To make efficient use of land at the Interchange site by utilising decked car park options in lieu of extensive surface level parking.

Providing Infrastructure and Securing Developer Contributions:

Set out strategic and local infrastructure needs in the Infrastructure Delivery Plan.

Work with stakeholders and partners in infrastructure delivery, including Transport for West Midlands, the CCG and NHS Estates, utility providers, statutory bodies and neighbouring authorities.

Allocate funding from developer contributions in the annual Infrastructure Funding Statement to enable timely delivery of infrastructure to support development and growth objectives.

1.1.15 In the context of the above vision and objectives, the current version of the Local Plan sets out the following:

- A spatial strategy for Solihull
- A series of planning policies to guide development in the Borough to 2036.
- Site allocations and policies for housing, mixed use development, and employment uses.

2. Sustainability Appraisal for the Solihull Local Plan Review

2.1 Sustainability Appraisal explained

2.1.1 SA considers and communicates the likely significant effects of an emerging plan, and the reasonable alternatives considered during the plan making process, in terms of key sustainability issues. The aim of SA is to inform and influence the plan-making process with a view to avoiding or mitigating negative effects and maximising positive effects. Through this approach, the SA seeks to maximise the emerging Local Plan's contribution to sustainable development.

2.1.2 An SA is undertaken in line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations) which transpose into national law the EU Strategic Environmental Assessment (SEA) Directive.[4] SA also widens the scope of the assessment from focusing largely on environmental issues to also include social and economic issues.

2.1.3 The SEA Regulations require that a report is published for consultation alongside the draft plan that 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'. The report must then be taken into account, alongside consultation responses, when finalising the plan.

2.1.4 The 'likely significant effects on the environment' are those defined in Annex I of the SEA Directive as 'including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors'. Reasonable alternatives to the plan need to take into consideration the objectives of the plan and its geographic scope. The choice of 'reasonable alternatives' is determined by means of a case-by-case assessment and decision.[5]

2.2 This SA Report

2.2.1 At the current stage of plan-making, the Council has prepared a Pre-Submission Local Plan Review (2020). This will be subject to consultation under Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations.). Following this the Council will finalise the Plan and submit to the Secretary of State for Examination.

2.2.2 At this stage, it is necessary to prepare a full SA Report that documents the appraisal process that has been undertaken from the outset of plan-making.

2.2.3 This is for the benefit of those who might wish to make representations through the consultation and for the benefit of the plan-makers tasked with selecting preferred approaches for the Local Plan.

[4] Directive 2001/42/EC
[5] Commission of the European Communities (2009) Report from the Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions on the application and effectiveness of the Directive on Strategic Environmental Assessment (Directive 2001/42/EC). (COMM 2009 469 final).

2.2.4 This SA Report has been structured into three parts, as follows:

- **Part 1** introduces the SA process and initial steps that were taken to establish the focus and methodologies (i.e. Scoping)

- **Part 2** provides an outline of plan making to date, in association with the parallel SA process. In particular, this details the process of considering and appraising reasonable alternatives.

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- **Part 3** Provides an assessment of the pre-submission local Plan Review 'as a whole'.

2.3 What is the scope of the SA?

SA Scoping Report

2.3.1 The SEA Regulations require that: "When deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies". In England, the consultation bodies are the Environment Agency, Historic England and Natural England.[6]

2.3.2 These authorities were consulted on the scope of the Local Plan SA in October / November 2016.

2.3.3 The SA Scoping Report which provides the basis for the SA process is presented in **Appendix A**.

SA Framework

2.3.4 Drawing on the review of the sustainability context and baseline, the SA Scoping Report identified a range of sustainability problems / issues that should be a particular focus of SA, ensuring it remains targeted at the most important sustainability issues. These issues were then translated into a SA 'framework' of objectives and appraisal questions.

2.3.5 The SA Framework provides a way in which the sustainability effects of the Local Plan and alternatives can be identified and analysed based on a structured and consistent approach.

2.3.6 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.

2.3.7 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 1.1).

2.3.8 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

[6] In line with Article 6(3).of the SEA Directive, these consultation bodies were selected because *"by reason of their specific environmental responsibilities,[they] are likely to be concerned by the environmental effects of implementing plans and programme".*

Table 2.1: Sustainability topics established for Scoping

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

2.3.9 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.

2.3.10 An appropriate starting point for establishing the SA Framework was to use the framework set out in the Interim SA Report 2015. This was updated in the Interim SA Report 2017 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.

2.3.11 The framework remained broadly the same as that identified in previous scoping reports. The main changes were 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.

2.3.12 Given that scoping can only ever present the information available at the time of data collection, there will have been further changes to the baseline position and policy context since the publication of the last scoping report and interim SA Reports. For example, updates to housing needs, new government guidance and policy, and of course the recent unprecedented changes that have arisen as a result of the Covid19 Pandemic.

2.3.13 However, it is considered that the SA Framework remains appropriate, and another formal refresh of the scoping report is not considered to be proportionate to this stage of plan making.

Table 2.2 The SA Framework and corresponding key issues (Interim SA Report 2017)

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.	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	Performance indicators in the regeneration zone for North Solihull are lower the rest of the Borough. There is a relatively high level of small business start- ups. Continued growth and investment is expected to be experienced within Solihull over the Plan period
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.	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.	There is a need to reduce waste and increase reuse and recycling. However, the borough has relatively high rates of household waste. Abstraction of water is controlled; coupled with the need to reduce carbon emissions; there is a need to improve water efficiency.

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	a) Deliver reductions in greenhouse gas emissions to contribute to the achievement of national and local targets. b) Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.	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.	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.	Local Plans have a key role to play in helping to ensure that air quality improves and exposure to pollution is minimised and reduced. Parts of the Borough are more exposed and vulnerable to sources of noise such as the Airport. There are areas of grade 2 agricultural land that should be protected from development.

Sustainable Communities		
SA objective	***Supporting detail***	***Key Issues***
15. Reduce social exclusion and disparities within the Borough	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)	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.	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.

Site Appraisal Framework

2.3.14 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.

2.3.15 Mitigation measures have not been taken into account as this information is not available consistently for each site option. This stage of assessment is about identifying broad constraints, advantages and opportunities associated with site options, to help inform decision making.

2.3.16 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.

2.3.17 Site assessments have been undertaken at several stages throughout the Plan-making process. To ensure consistency between site options appraisal, datasets have been kept the same as much as is reasonable and appropriate. However, where there have been updates to national datasets, there may be slight differences between the data that earlier site options were appraised against (compared to site options only submitted in 2020).

2.3.18 The scores for all site options have been determined through a series of criteria and set thresholds as follows:

Table 2.3: Impact Significance

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

Table 2.4: Site Assessment Criteria

Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
Deprivation and equality SA1: To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived. SA15. Reduce social exclusion and disparities within the Borough	**Development located within top 10% most deprived** ✓✓ Located within top 20% most deprived ✓ Located within top 40% most deprived – Located within 60% least deprived ×	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.
SA2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.	**Access to primary school** **<400m** <800m 800-1200m 1.2km - 3km >3km **Access to secondary school** <1200m 1200m – 5km >5km	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 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.
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.	**Proximity to bus and train services** **Within 400m of a frequent bus or train service** (more than three bus services or 2 train services per hour) Within 400m of an infrequent bus or train service (less than 3 bus services or 2 train services per hour) Within 800m of a frequent bus or train service Within 800m, of an infrequent bus or train service Within 1400 m of an infrequent bus or train service More than 1400m of a bus stop or train station **Proximity to principal road network for employment sites** Less than 1km Less than 3km More than 3km	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.

Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
SA4. Minimise the use of natural resources such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling.	**Soil** Does not contain any agricultural land Grade 1-3b Contains less than 10 ha of agricultural land 1-3b Contains more than 10 ha of agricultural land 1-2 or >20ha of 1-3b land. Contains more than 20ha of agricultural land 1-2 or >50ha 1-3b **Minerals** Site within minerals safeguard area Site outside of minerals safeguard area	Although there is little guidance, the loss of 20 hectares triggers consultation with DEFRA/Natural England, which can be considered significant. Development within areas safeguarded for mineral reserves could potentially lead to sterilisation of minerals (though further exploration would be necessary to confirm).
SA5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation	Development within proximity of heat demand / anchor loads Development not within proximity of heat demand / anchor loads	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.
SA6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate. SA8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.	Design features will play a more important role than location in the achievement of this objective. Therefore, no criteria have been established.	
SA7. Manage, maintain and where necessary improve the drainage network to reduce the effects of flooding on communities and businesses.	**Flood risk** Site is located entirely within Flood Zone 1 and / or Surface water flooding 1000 years Some of the site is in Flood Zones 2 or 3 (up to 50%) and / or Surface water flooding 100 years Most of the site is in Flood Zones 2 or 3 (more than 50%) and / or surface water flooding 30 years	Provided that a site is not wholly within a flood zone 2/3 it should be possible to avoid and/or mitigate impacts. However, proximity to zone 1 is preferable as it reduces the risk and potential cost of mitigation. Sites wholly within zones 2 and 3 should be sieved out. However, for those sites where it is considered mitigation could still be implemented a 'red' categorization is given.

Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
SA9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	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. Site does not contain local wildlife sites and .or records of LBAP priority habitats and species Overlaps or contains a local wildlife site and / or records of priority species and habitats. Site is of strategic scale to enhance ecological networks.	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.
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.	Landscape with very low sensitivity to change Landscape with low sensitivity to change Landscape with medium sensitivity to change Landscape with high sensitivity to change	The categories correspond to the overall landscape sensitivity classifications as set out in the Solihull Landscape Character Assessment (November 2016).
SA11: To facilitate the delivery and enhance the quality of areas providing green infrastructure.	**Access to greenspace** (*amenity open space, natural open space*) • *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* Meets both standards Meets one standard Meets neither standard	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). ANGST is considered a useful measure of the sustainability of locations and is endorsed by Natural England.
SA12. To enhance, conserve and protect buildings, sites and the setting of historic assets as part of development projects	**Proximity to heritage assets and impact upon Setting** 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. Heritage assets within 100m of site: 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. 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.	
SA13. To deliver improvements in townscape and enhance local distinctiveness.		

Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
	Development is unlikely to affect the significance of a heritage asset or provides a positive opportunity to enhance or better reveal that significance	
SA14. Minimise air, soil, water, light and noise pollution.	**Amenity** Sources of noise adjacent to site that could affect amenity *(A/B road, industrial park, agricultural processes*). No sources of noise adjacent to site	Undertaken using site visits, desktop analysis of mapping imagery and professional opinion.
SA16. Improve the supply and affordability of housing (particularly in the areas of greatest need) *Housing sites only*	**Housing site deliverable within 0-5 years** Deliverable within the plan period Deliverability uncertain	Provision of a higher level of development would contribute more significantly to the Borough's housing targets and would achieve economies of scale. It is important to recognise that availability may change over time.
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.	**Access to healthcare** **Within 400m of a GP or health centre** Within 1200m of a GP or health centre Within 2.5km of a GP or health centre Within 5km of a GP or health centre More than 5km from a GP	
	Access to leisure and play facilities (*allotments, parks, sports centres, play areas, cycle routes*) **Within 400m of at least two facilities** Within 400m of at least one facility Within 800m of at least two facilities Within 800m of at least one facility Within 1200m of at least two facilities Within 1200m of at least one facility More than 1200m of any facilities	
SA18. Reduce crime, fear of crime and anti-social behaviour.	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. 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.	

Topics and corresponding SA Objectives	Site appraisal criteria and thresholds	Assumptions and rationale
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.	**Access to jobs** *(key economic assets)* **<1200m** <2.5km <5km <7.5km >7.5km **Access to local convenience store or supermarket** **<400m** <800m 800-1200m 1.2km - 3km >3km	

Limitations of the appraisal

2.3.19 Table 2.3 above sets out assumptions and rationale behind each of the site criteria. This considers some of the limitations in the data. For example, data sources can be updated and change over time.

2.3.20 The Local Plan Review is supported by a comprehensive evidence base[7]. Some of this evidence is relevant to this appraisal and can be relied upon. However, evidence only provides a snapshot in time, and given the lengthy period of time for the Plan to be prepared, some evidence is more than 3 years old. For example:

- The Strategic Housing Market Assessment (SHMA) (November 2016)
- The Employment Land Review (January 2017)
- The Fair Treatment Assessment (November 2016)
- The Strategic Housing and Economic Land Availability Assessment (SHELAA) (November 2016)
- Solihull Accessibility Mapping (December 2016)
- Green Belt Assessment (July 2016)
- Local Plan Review Draft Constraints Map (November 2016)
- Landscape Character Assessment (December 2016)
- The UK Central Hub Growth and Infrastructure Plan (March 2017)
- Water Cycle Study (May 2017)

[7] https://www.solihull.gov.uk/lpr/evidence

2.3.21 There may have been a change in conditions since these studies were undertaken, particularly relating to socio-economic factors. However, the Council considers that this evidence remains valid and appropriate. A number of updates are also underway, including to critical pieces of evidence such as the SHMA and Employment Land Review, in the form of the Housing and Economic Development Needs Assessment (HEDNA), and the SHELAA/Accessibility mapping.

Part 2: What has plan making / SA involved?

3. The Plan Making timeline

3.1.1 The aim of Part 2 of the SA Report is to explain work undertaken between 2015 and 2020 to develop and then appraise the Local Plan strategy and any reasonable alternatives.

3.1.2 It also seeks to explain how the Council has taken into account the findings of the appraisal of reasonable alternatives when developing the Local Plan Review. Presenting this information is important given regulatory requirements.[8]

3.1.3 Preparation of the Solihull Local Plan 2018-2036 began in 2015. As highlighted already, three main consultations have been undertaken to date for the Local Plan, on Local Plan Issues and Options in November 2015, on an earlier version of the draft Local Plan in November 2016, and on targeted site-specific elements in January 2019.

3.1.4 Figure 3.1 below summarises the key documents prepared to date as part of the Local Plan and SA processes.

3.1.5 As indicated above, a key element of the SA process to date has been the appraisal of 'reasonable alternatives' for the Local Plan. The SEA Regulations[9] are not prescriptive as to what constitutes a reasonable alternative, stating only that the SA Report should present an appraisal of the *'plan and reasonable alternatives taking into account the objectives and geographical scope of the plan'*.

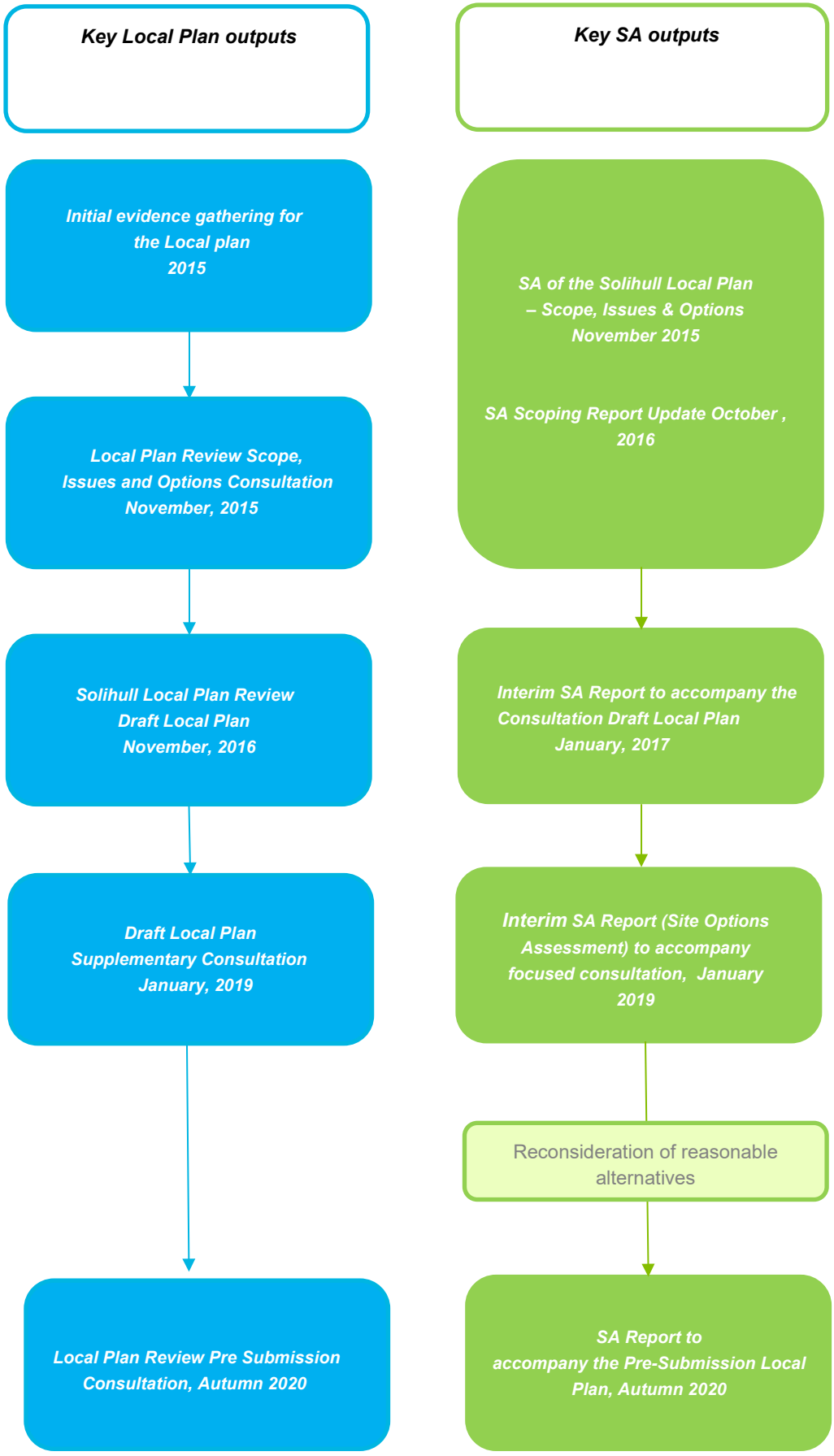
3.1.6 A focus of reasonable alternatives development has been with respect to the spatial strategy and the allocation of land in Solihull. The following chapters therefore describe how the SA process has informed the preferred spatial strategy for Solihull and potential locations for proposed development.

3.1.7 Specifically, the chapters explain how the Local Plan's spatial strategy has been developed in terms of housing numbers and distribution.

[8] There is a requirement for the SA Report to present an appraisal of 'reasonable alternatives' and 'an outline of the reasons for selecting the alternatives dealt with

[9] Environmental Assessment of Plans and Programmes Regulations 2004

Figure 3.1: Key outputs of the Solihull Local Plan 2020-2036 and accompanying SA process to date



4. Establishing and appraising the spatial strategy and reasonable alternatives

4.1 SA of the Solihull Local Plan Strategic Housing Options (2015)

4.1.1 The SA of the Solihull Local Plan – Scope, Issues and Options (November 2015) considered the following strategic six strategic housing Options[10].

- Option A: Public transport corridors;
- Option B: Solihull Town Centre;
- Option C: North Solihull/Chelmsley Wood;
- Option D: Shirley Town Centre and the A34 corridor;
- Option E: UKC Hub and HS2;
- Option F: Limited expansion of rural villages/settlements; and
- Option G: New settlements/large scale urban extensions or significant expansion of rural villages.

4.1.2 The SA provided a description of each option, outlined area profiles and provided forecast effects for each option. For clarity we provide the previous overview of the performance of the housing options previously assessed below at Table 4.1 (the Interim SA Report, 2015 provides a full assessment of the options). Conceptual maps of each option are provided below at Figure 4.1.

4.1.3 Perhaps not surprisingly, the options that performed best were Option E (the UK Hub & HS2) and Option B (Solihull Town Centre). Both did well against the sustainable consumption and production theme.

4.1.4 The Solihull Town Centre Option performed best in terms of the sustainable communities theme as its central location enables a wider community to benefit (See Table below).

4.1.5 There was little to choose between these Options against the greenhouse gases and climate change theme, with the unrestricted opportunities to deliver fully integrated green infrastructure favouring the UK Hub & H2 Option.

4.1.6 The options performing less well were Option F (Limited Expansion of Rural Settlements) and Option G (the Urban Extensions or Significant Rural Expansions).

4.1.7 However, given the many different permutations that could be developed within both of these options, it was considered unwise to dismiss the exploration of expansion of some of the rural settlements such as Knowle/Dorridge, Hampton in Arden and Balsall Common. Of the urban edge opportunities for urban extensions, Elmdon Park and South of Stratford Road were considered to merit further examination.

[10] https://www.solihull.gov.uk/Portals/0/Planning/LPR/Sustainability_Appraisal_Scope_%20Issues_%20Options.pdf

4.1.8 There was considerable uncertainty in these conclusions. For example the moderate adverse performance assigned to the North Solihull/Chelmsley Wood Option arises because of the likelihood of adding to the congestion of the M42Junction 6 during the development of the HS2 Interchange. By timing of highway improvements such congestion may be mitigated such that in the longer-term high quality public transport access assists in reducing the need to travel by car.

4.1.9 Of note at this stage was that the Urban Extensions / Significant Rural Expansion (Option G) are likely to give rise to a major adverse outcome. This arises partly due to the loss of open land, the anticipated need for highway improvements and the additional demands placed upon education, health and social care services. These effects are however, considered to be more apparent with the Eastern Rural and South West Rural settlements.

Table 4.1: Overall Performance of the Housing Options (2015)

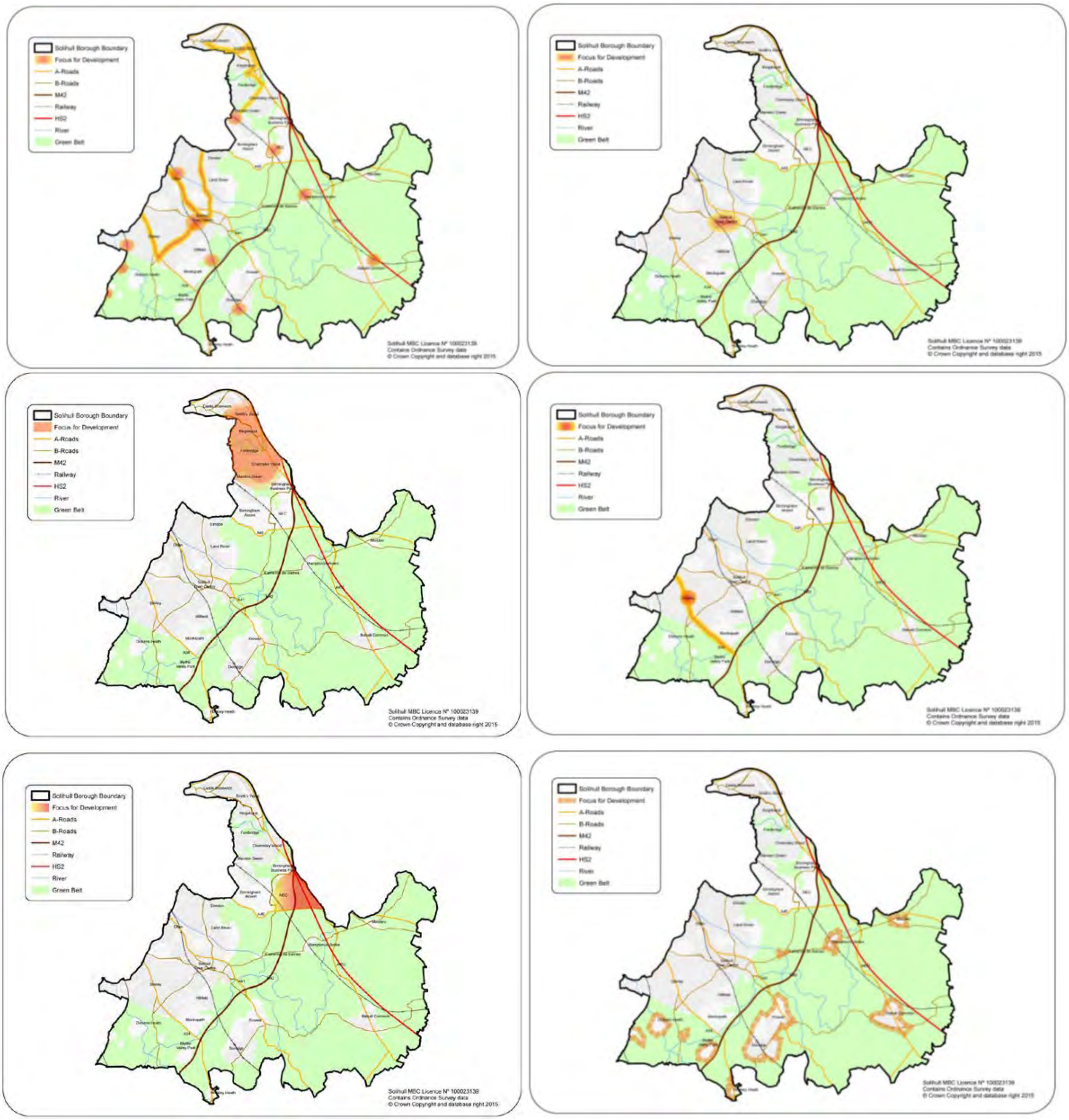
	Option A: Public transport corridors	Option B: Solihull Town Centre;	Option C: North Solihull/Chelmsley Wood	Shirley Town Centre and the A34 corridor	UKC Hub and HS2	Limited expansion of rural villages/settlements	New settlements/large scale urban extensions or significant expansion of rural villages
Prosperity	2	2	1	2	3	1	1
Access to jobs	2	2	1	2	3	1	2
Reducing travel	1	1	-2	0	3	-1	-2
Resource efficiency	1	2	-1	-1	3	-1	-3
Greenhouse gases	-1	1	1	-1	0	-1	1
Business adaptation	0	0	0	0	0	0	0
Losses from flooding	0	0	-1	-1	0	0	-1
Urban adaptation	1	1	0	0	3	0	1
Biodiversity	1	1	1	1	1	0	1
Landscape	-1	0	-1	-1	1	-1	-2
Green infrastructure	1	1	1	1	2	0	1
Historic environment	-1	-1	0	0	-1	-1	-1
Built environment	1	2	1	0	2	0	-1
Pollution	-1	-1	0	0	0	0	0
Deprivation	1	1	1	1	1	0	1
Housing	2	2	2	2	2	1	2
Commercial Assets	1	2	1	2	3	2	2
Health inequalities	1	1	1	1	0	0	0
Crime	0	1	0	1	0	0	0
Public safety	1	1	0	0	0	-1	-1
Mixed development	0	2	1	1	1	0	1
	12	21	7	10	27	-1	2

Major Beneficial | Moderate Beneficial | Minor Beneficial | Neutral | Minor Adverse | Moderate Adverse | Major Adverse

Table 4.2 Broad Options for Growth & Development Previously Proposed

Scope, Issues and Options consultation (November 2015)	Draft Local Plan Consultation (December 2016)
Growth Option A – High Frequency Public Transport Corridors & Hubs	As previously proposed
Growth Option B – Solihull Town Centre	As previously proposed
Growth Option C – North Solihull/Chelmsley Wood	As previously proposed
Growth Option D – Shirley Town Centre & the A34 Corridor	As previously proposed
Growth Option E – The UK Central Hub Area & HS2	• Land to the east of the NEC
Growth Option F – Limited Expansion of Rural Villages/Settlements	• Land to the east of Hampton-in-Arden • Land to the west of Meriden • Land south and south east of Balsall Common
Growth Option G – New Settlements, Large Scale Urban Extensions or Significant Expansion of Rural Villages/Settlements	**Large Scale Urban Extensions** • Land to the north east of Damson Parkway • Land south of Shirley (either side of Tanworth Lane) • Land east of Solihull (between Lugtrout Lane and Hampton Lane) **Significant Expansion of Rural Villages/Settlements:** • Land west of Dickens Heath • Land south of Knowle • Land north east of Knowle Land north-east of Balsall Common

Figure 4.2: Options A to G from the Issues and Consultation (Nov 2015)



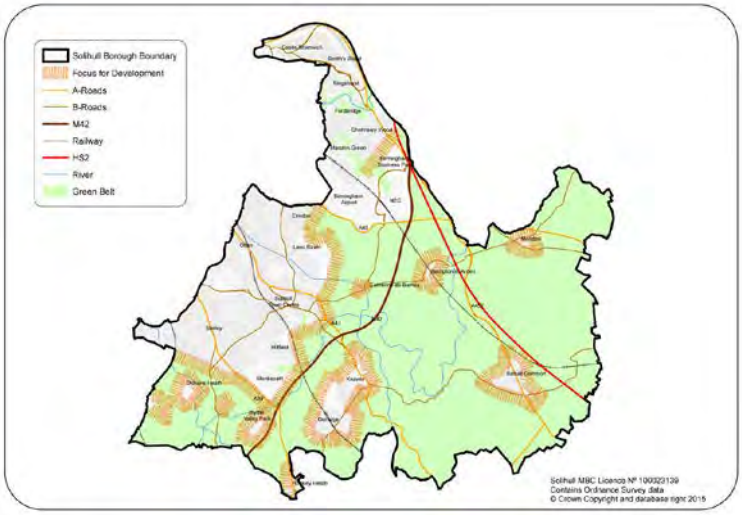
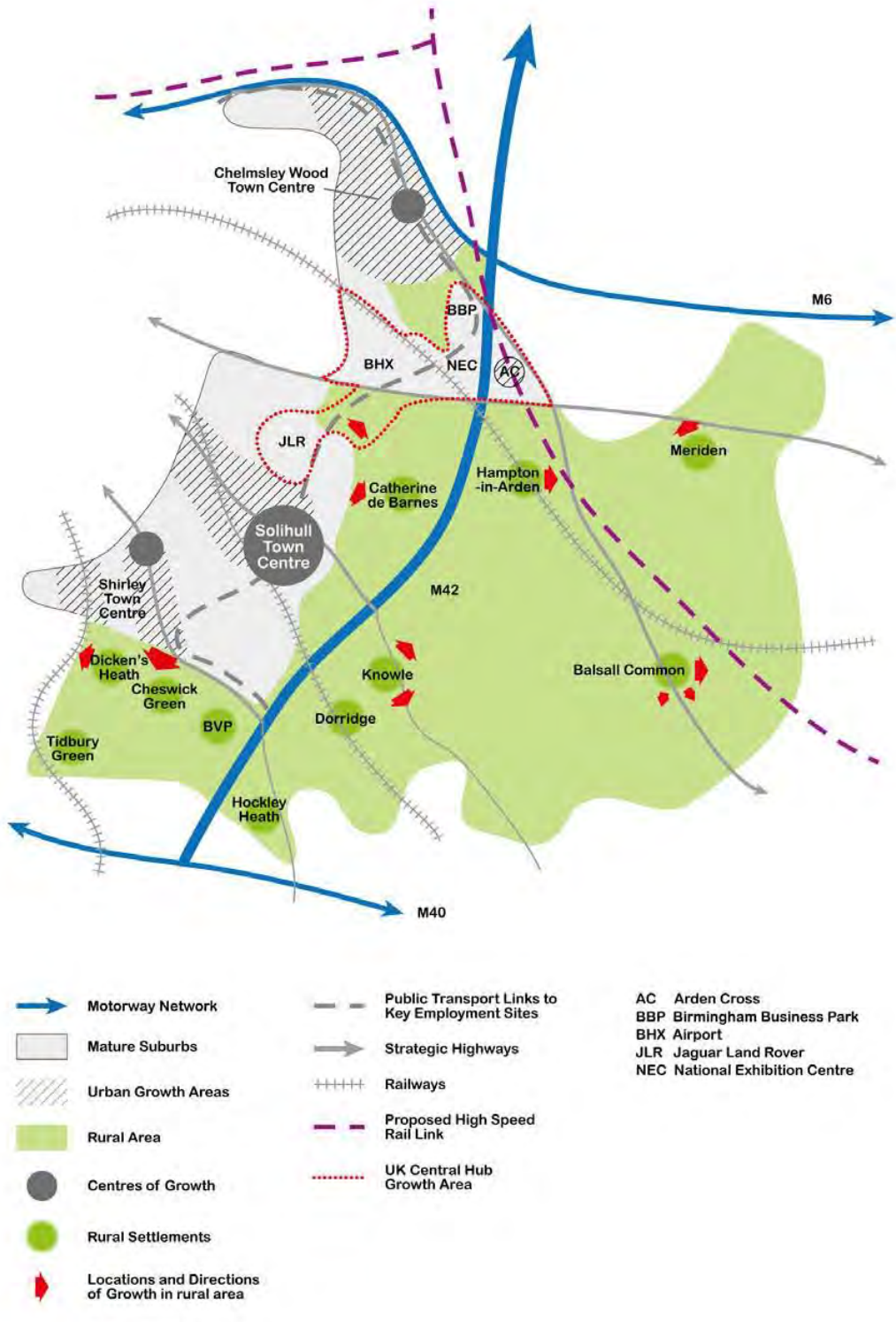

Solihull Borough Boundary
Focus for Development
A-Roads
B-Roads
M42
Railway
HS2
River
Green Belt
Solihull MBC Licence No 100023139
Contains Ordnance Survey data
© Crown Copyright and database right 2015

Figure 4.3: Spatial Strategy Key Diagram from Draft Local Plan



4.2 SA of the Solihull Local Plan Strategic Housing Options and draft Policies (2017)

4.2.1 Following on from the issues and options stage, additional work was undertaken to develop the spatial strategy. Further consideration of reasonable alternative options was undertaken by combining a range of distribution and growth scenarios.

4.2.2 In January 2017, an Interim SA Report of the Consultation Draft of the Local Plan was published[11]. The SA of the Solihull Local Plan Review (January 2017) considered the following twelve alternative approaches to the delivery of housing growth and distribution for the Borough.

4.2.3 For clarity, we have provided the findings from the options assessment undertaken at this stage below. Appendix C contains the full assessment.

Table 4.3: Alternative Approaches to Housing Growth and Distribution (2017)

	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	*Alternative 1a*	*Alternative 1b*	*Insufficient land to deliver this distribution at this level of growth*
2. Focus on Urban Areas and UK Central Hub and High Speed 2 Interchange area	*Alternative 2a*	*Insufficient land to deliver this distribution at this level of growth*	*Insufficient land to deliver this distribution at this level of growth*
3. Focus on Urban Areas and Urban Extensions	*Alternative 3a*	*Alternative 3b*	*Alternative 3c*
4. Focus on Urban Areas, New Settlements, and significant expansion of Rural Settlements	*Alternative 4a*	*Alternative 4b*	*Alternative 4c*
5. Combination of spatial approaches	*Alternative 5a*	*Alternative 5b*	*Alternative 5c*

[11] https://www.solihull.gov.uk/Portals/0/Planning/LPR/interimreport.pdf

Growth scenario A (Meet needs)

4.2.4 Alternative 2a was 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 were also predicted to have positive effects on these areas, but at a lesser magnitude. Alternative 3 was predicted to have positive effects too for employment and transport, though would be less beneficial for regeneration. Alternative 4a performed the least positively, with a minor negative effect associated with transport, due to the more dispersed nature of development.

4.2.5 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.

4.2.6 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.

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

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

Growth Scenario B (Meet needs +)

4.2.9 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.

4.2.10 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.

4.2.11 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.

4.2.12 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.

4.2.13 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.

4.2.14 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.

4.2.15 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 ++)

4.2.16 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.

4.2.17 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.

4.2.18 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).

Decision making rationale

4.2.19 At this stage of the Plan making process, each alternative under Growth Scenario A was rejected. The primary reason for this was that 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.

4.2.20 Each alternative under Growth Scenario C was also 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.

4.2.21 At the draft Plan stage, 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) reflected 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 was weighed against the Borough's capacity for growth over the plan period.

4.2.22 The Councils preferred distribution strategy at this stage reflected 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.

4.2.23 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.

4.3 Appraisal of draft Plan Policies

4.3.1 A set of draft policies were included within the draft Local Plan to support the spatial strategy and deal with other important issues. Each policy was appraised against the SA Framework individually and collectively, to understand the effects of the Local Plan Review 'as a whole'. At this stage, recommendations were made through the SA to mitigate identified negative effects and to promote enhanced positives.

4.4 The Greater Birmingham HMA Strategic Growth Study

4.4.1 Following the SA work on spatial options described above, further work was undertaken across the HMA with implications / relevance to the spatial strategy for Solihull.

4.4.2 In particular, the Greater Birmingham HMA Strategic Growth Study (GBHMA)[12] considers the strategic housing market area need for Greater Birmingham and the Black Country, to 2036 and sites where housing growth could be implemented to fulfil Birmingham's functional HMA need.

4.4.3 The functional HMA extends to include the Black Country and parts of Worcestershire, Warwickshire and Staffordshire and includes several local authorities within the Great Birmingham and Solihull LEP area.

4.4.4 The Study first considers areas within the HMA, but beyond the Green Belt, which could potentially accommodate strategic development. These areas where not within Solihull Metropolitan Borough Council. Following this, the study considered potential areas of search in the Green Belt which was subject to a Strategic Green Belt Review.

4.4.5 The Study recommends a number of 'Areas of Search' for strategic development which should be taken forward for further assessment through the plan-making process as having potential to contribute to meeting the housing needs shortfall; together with the areas where 'Proportionate Dispersal' is identified as potentially appropriate within and beyond the Green Belt and other small-scale development opportunities.

4.4.6 In appraising the 'Areas of Search' identified, the consultancy team considered a range of factors including some of the following. The ability to meet housing needs. The unmet housing need is particularly that of "the conurbation" and thus the geographic relationship to the conurbation and distance of locations from this. The Sustainability Appraisal undertaken to identify the best performing locations and excluding those with 'significant negative outcomes' against one of more of the SA objectives. The accessibility to public transport and particularly to the rail network, is an particularly important consideration within the wider sustainability of different development options.

4.4.7 The 'Areas of Search' for Strategic Development which the study recommend should be taken forward for future assessment through the plan-making process in Solihull Metropolitan Borough Council include the following;

- 19. Around Balsall Common – New Settlement
- 22. South of Birmingham Airport & NEC – Employment-Led

[12] GL Hearn – Wood Plc report; Greater Birmingham HMA Strategic Growth Study Feb. 2018

4.5 The Greater Birmingham HMA Strategic Growth Study Sustainability Appraisal

4.5.1 As part of the GBHMA a 'sustainability appraisal' was undertaken by GL Hearn which considered the areas of search along with a development model appraisal[13]. The findings have been summarised below to complement any additional work undertaken through the SA for the Solihull Local Plan.

4.5.2 The assessment of the Areas of Search for 19. Around Balsall Common indicated the following;

- The area is within 5km of the conurbation but beyond 2.5km and will therefore help to meet a relatively significant proportion of the need;
- Wholly within an area making a Principal Contribution to Green Belt purposes;
- Negative outcome overall from Sustainability Appraisal;
- Around 2km to the nearest train station with a journey time of 20 minutes to Birmingham New Street; and
- More modest highways infrastructure potentially required for this location relative to others however utilities infrastructure likely to be significant. Strong market and residential values, and relationship to employment centres. Scoring takes account of funding potential with major growth.

4.5.3 We summarise the GBHMA Study appraisal findings below for around Balsall Common.

Table 4.4: *Broad Location 19 - Around Balsall Common (New Settlement)*

SA Objective	To what extent is the Development Model likely to:	AoS Score
Use natural resources efficiently	Minimise use of greenfield land, limit water consumption and the production of waste?	+/---
Contribute to climate change mitigation	Make a substantial contribution through measures such as renewable energy and SuDS? Help to avoid locating development in areas of flood risk and, where possible, contribute towards reducing flood risk?	+++
Adapt to the effects of climate change	Be an exemplar for a multifunctional response to climate change?	+++/--
Promote energy efficiency and use of sustainable modes of transport and energy efficiency	Create a significant and enduring shift in the travel mode and pattern of residents, as part of a wider, design-led reduction in CO2 emissions? Reduce the need for use of unsustainable forms of travel?	+++/--
Protect, enhance and restore the quality of	Protect, enhance and restore the special qualities of natural and cultural resources?	++/---

[13] GL Hearn – Wood Plc report; Greater Birmingham HMA Strategic Growth Study Feb. 2018 Appendix C Strategic Sustainability Appraisal Framework, Appendix D Area of Search Appraisal and Appendix E Development Model Appraisal.

landscape, townscape, biodiversity and geodiversity		
Limit potential for additional pollution of air, soil and water	Result in no additional pollution load? Contribute towards a reduction in pollutant loading?	++/---
Promote a strong and sustainable economy which invests in skills development	Provide a significant source of employment which contributes to a high degree of self-containment?	+++
Encourage the creation of high quality and diverse environments that promote a sense of place	Provide extensive and varied open space as part of a well-designed and built environment? Ensure the protection and enhancement of human health and wellbeing? Promote regeneration of deprived areas?	+++
Provide decent and affordable housing of the right quantity, type, tenure and affordability to meet local needs	Provide a range of opportunities for affordable housing across a range of tenures?	+++

4.5.4 The assessment of the Areas of Search for 22 South of Birmingham Airport & NEC indicated the following;

- This area is within 2.5km of the conurbation and will therefore directly help to meet the need;
- Wholly within an area making a Principal Contribution to Green Belt purposes;
- Positive outcome overall from Sustainability Appraisal;
- Around 1km to the nearest train station with a journey time of 10 minutes to Birmingham New Street; and
- Modest additional highways works required together with modest additional utilities infrastructure. Area of higher residential values. Major development in this area will support infrastructure provision.

4.5.5 We summarise the GBHMA Study appraisal findings below for South of Birmingham Airport & NEC

Table 3.5: Broad Location 22 - *South of Birmingham Airport & NEC (Employment led)*

SA Objective	To what extent is the Development Model likely to:	AoS Score
Use natural resources efficiently	Minimise use of greenfield land, limit water consumption and the production of waste?	**+/--**
Contribute to climate change mitigation	Make a substantial contribution through measures such as renewable energy and SuDS? Help to avoid locating development in areas of flood risk and, where possible, contribute towards reducing flood risk?	**++**

Adapt to the effects of climate change	Be an exemplar for a multifunctional response to climate change?	**++/-**
Promote energy efficiency and use of sustainable modes of transport and energy efficiency	Create a significant and enduring shift in the travel mode and pattern of residents, as part of a wider, design-led reduction in CO2 emissions? Reduce the need for use of unsustainable forms of travel?	**++/-**
Protect, enhance and restore the quality of landscape, townscape, biodiversity and geodiversity	Protect, enhance and restore the special qualities of natural and cultural resources?	**+/-**
Limit potential for additional pollution of air, soil and water	Result in no additional pollution load? Contribute towards a reduction in pollutant loading?	**++/--**
Promote a strong and sustainable economy which invests in skills development	Provide a significant source of employment which contributes to a high degree of self-containment?	**+++**
Encourage the creation of high quality and diverse environments that promote a sense of place	Provide extensive and varied open space as part of a well-designed and built environment? Ensure the protection and enhancement of human health and wellbeing? Promote regeneration of deprived areas?	**++/?**
Provide decent and affordable housing of the right quantity, type, tenure and affordability to meet local needs	Provide a range of opportunities for affordable housing across a range of tenures?	++

5. Reconsidering strategies for housing growth and distribution

5.1 Introduction

5.1.1 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 housing requirement target 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.

5.1.2 As demonstrated in the previous chapter, a lot of work has already been undertaken to test alternative growth options and distribution configurations. However, given the fluid nature of plan-making, the Council have considered it necessary to review spatial options to account for:

- Changes to the methods to calculate housing need that have been introduced.
- To address cross-boundary issues more explicitly in relation to unmet housing needs from Birmingham in particular.
- Updates to the evidence base and the emergence of new options for strategic growth across the HMA.

5.1.3 The following sections describe how the Council have built upon previous options development work to identify a fresh set of reasonable alternatives that take account of these factors. The previous appraisals and the conclusions in relation to the proposed draft Plan are still relevant though. Therefore, previous stages of plan making and SA set the context within which the revised alternatives have been established.

5.2 Housing Growth

5.2.1 The starting point to identify an appropriate level of growth is to seek to establish the Local Housing Need Figure using the New Standard Methodology introduced by the revised National Planning Policy Framework in July 2018.

5.2.2 Using 2020 as the base date, and 2036 as the end date (on the basis that if the plan is adopted in 2021 and it has a 15 year time span post adoption) the total Local Housing Need figure (just for the Borough's own needs) would be 12,912 new dwellings (i.e. 807 dwellings per annum over the 16 year period from 2020 to 2036).

5.2.3 Under the Duty-to-Cooperate the Council has been working with its partners to address an identified shortfall that is occurring within the wider Housing Market Area. The Draft Local Plan included a commitment to test the implications of accommodating 2,000 dwellings from the shortfall identified in the Birmingham Development Plan. Using the same contribution, the overall housing requirement to be addressed in the Local Plan Review would, using the standard methodology, be 14,912 dwellings over the period 2020 to 2036, or 932 dwellings per year.

5.2.4 As a means to facilitate the Duty-to-Cooperate discussions the 14 HMA authorities commissioned the Greater Birmingham HMA Strategic Growth Study (GBHMA)[14]. This is an independently prepared, objective study and not a policy statement. It simply provides an evidence base to take matters forward through the local plan review process.

5.2.5 The GBHMA analysis indicated that based on supply assumptions at the time of the Study, and taking into account proposed allocations in emerging plans, there is an outstanding minimum shortfall of 28,150 dwellings to 2031 and 60,900 dwellings to 2036 across the Greater Birmingham HMA. An agreed position statement across the 14 authorities confirmed that a significant shortfall exists across the HMA.[15] However, an update position statement in September 2020 indicates that the shortfall to 2031 has been substantially reduced to around 2,600 dwellings, but that there will be a shortfall to 2036 (although the scale of this shortfall is not known).

Consideration of alternatives

5.2.6 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. These considered the options for growth outlined at the Scope, Issues & Options stage, the proposed Draft Plan Stage and those put forward in the GL Hearn Strategic Growth Study.

5.2.7 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: Continue with the SLP 2013 Spatial Strategy, based on urban renaissance

This approach was previously 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 the scale of growth now required in meeting the Local Housing Need and would not enable economic & social benefits of the HS2 Interchange to be maximised.

Reasonable alternative 1: Meet Local Needs only (12,912 dwellings)

This is still considered to be a reasonable approach as it would address the identified Local Housing Need figure for Solihull. 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.

Reasonable alternative 2) Meet Local Needs plus, including an element of HMA shortfall (plus 2000 dwellings)

This is still considered to be a reasonable approach as it would address the identified Local Housing Need figure for Solihull as well as making a contribution to wider housing market area (HMA) shortfall.

[14] GL Hearn – Wood Plc report; Greater Birmingham HMA Strategic Growth Study Feb. 2018
[15] https://www.solihull.gov.uk/Portals/0/Planning/Greater-Birmingham-HMA-Position-Statement-February-2018.pdf

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.

Reasonable alternatives 3, 4, 5 and 6) Meet Local Needs plus a higher contribution to the HMA shortfall (plus 3,000 or 6,000 or 9,000 or 12,000 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, and respond to the areas of search identified in the GL Hearn Strategic Growth Study.

Unreasonable alternative 7) Meet local needs plus a higher contribution to the HMA shortfall (plus growth in excess of 12,000 dwellings)

This approach was rejected by the Council as such an approach would be contrary to the Greater Birmingham HMA Strategic Growth Study. It would result in the loss of strategically important GB identified in that study which has been identified as performing a key role in separating Birmingham & Coventry. The Council have also rejected the approach as it could potentially overwhelm infrastructure including transport infrastructure.

5.3 Housing distribution

5.3.1 The Council identified a range of options in the Scope, Issues and Options document. The table below summarises the capacity of these Options outlined in the Scope, Issues and Options document. Options B, C, D and E have limited capacity, so are not considered reasonable strategies to pursue in isolation. 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.

Table 5.1: Housing Distribution – Scope, Issues and Options Document (Solihull Council November 2015)

Option	Estimated New Homes Capacity
Growth Option A - High Frequency Public Transport Corridors and Hubs	Not Defined 8,300 hectares within reasonable cycling distance (3.75km) of 10 train stations of the Borough.
Growth Option B - Solihull Town Centre	950 new homes
Growth Option C - North Solihull/ Chelmsley Wood	660 new homes allocated
Growth Option D - Shirley Town Centre and the A34 Corridor	Up to 730 new homes
Growth Option E - The UKC Hub & HS2	1,900 new homes
Growth Option F - Limited Expansion of Rural Villages/Settlements	Not Defined

Growth Option G - New settlements, Large Scale Urban Extensions or Significant Expansion of Rural Villages/Settlements	Not Defined

5.3.2 Following on from previous options work, and to help inform the pre-Submission Local Plan, the Council has identified a variety of locations where additional growth could reasonably be accommodated (either alone or in combination depending upon the scale of growth). These combine a number of different spatial approaches to housing delivery considered at previous stages and in the Greater Birmingham HMA growth study.

<u>Focus on Urban Areas, Urban extensions and limited expansion of smaller settlements and significant expansion of larger settlements along Public Transport corridors and hubs at Whitlocks End and Berkswell rail stations (Elements of SIO Options A, B, C, D, F, G).</u>

- This approach would include Solihull Town Centre, North Solihull/ Chelmsley Wood, the A34 Corridor and support strategic priorities in Solihull Connected.
- This approach offers potential for sustainable locations in the Green Belt, close to public transport corridors/hubs, including urban extensions south of Shirley, and limited to significant expansions of villages/settlements of Dickens Heath, Knowle and Balsall Common.
- This approach could meet local needs, but would not make the most of the UK Central Masterplan or HS2 Growth Strategy.

<u>Additional growth focused at UK Central Hub and High Speed 2 Interchange area</u>

- This approach would support strategic priorities around UK Central/High Speed 2 Growth Strategy.

<u>Further limited expansion of settlements (Amber Sites)</u>

- This approach would further include the rounding of the Green Belt in sustainable locations such as Whitlocks End and Widney Manor, and would result in further expansion of Knowle (close to the village centre) and Dorridge (close to the railway station).

<u>Extension south of A45 (employment E3 option in GL Hearn Growth Study)</u>

- This approach proposes an urban extension south of A45/Airport as identified in the GBHMA Strategic Growth Study

<u>New Settlement at Balsall Common (as suggested in NS4 option in GL Hearn Growth Study)</u>

- This approach proposes a new settlement surrounding Balsall Common as a location identified in the GBHMA Strategic Growth Study.
- There are several broad locations surrounding Balsall Common that could support growth a range of growth targets.

Table 5.2: Housing Distribution options

Locational Options	Estimated New Homes Capacity (rounded)
Focus on Urban Areas and extensions in the Green Belt along Public Transport corridors and hubs.	13,000
Focus on Urban Areas, extension in the Green Belt along Public Transport Corridors **and additional growth at a single broad location:** • UK Central Hub and High Speed 2 Interchange area • South of A45 • Balsall Common	15,000
Additional growth at identified Amber Sites.	16,000
Focus on Urban Areas and extensions in the Green Belt along Public Transport corridors and hubs, and **additional growth at multiple broad locations to achieve a higher scale of growth.**	Up to 19,000
Focus on Urban Areas and extensions in the Green Belt along Public Transport corridors and hubs, and **additional growth at multiple broad locations to achieve a higher scale of growth (including the potential for significant growth at Balsall Common of 6000-9000 dwellings).**	Up to 25,000

5.4 Combining growth and distribution alternatives

5.4.1 To give the six growth options context, they have been combined with the reasonable forms of distribution identified above. This gives rise to thirteen alternative approaches to the delivery of housing growth and distribution for the Borough. Each option starts with Option 1A as a 'baseline' position, and then adds additional growth in a range of locations to achieve the higher housing targets. Therefore, common to every option is the following:

- Focus on Solihull Town Centre, North Solihull / Chelmsley Wood, the A34 Corridor and support strategic priorities in Solihull Connected.
- Sustainable locations in the Green Belt, close to public transport corridors/hubs, including urban extensions south of Shirley, and limited to significant expansions of villages/settlements of Dickens Heath, Knowle and Balsall Common.

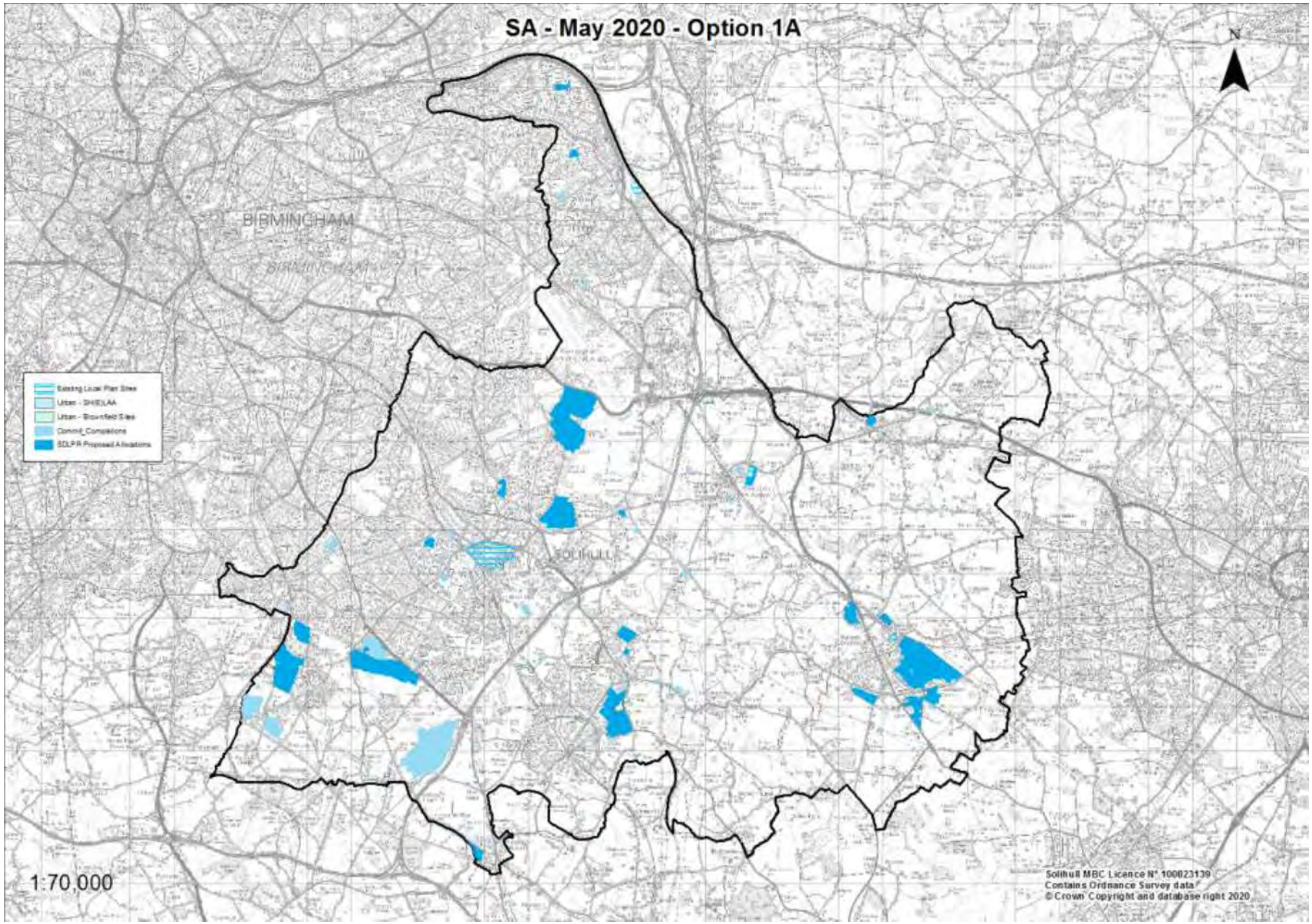
Table 5.3: The refined Reasonable Alternatives

Alternatives	1A	1B	2A	2B	2C	3A	3B	3C	4A	4B	5A	5B	6A
Growth Scenarios	1. 13,000		2. 15,000			3.16,000			4. 19,000		5. 22,000		6. 25,000
Alternatives, what is being compared?	**Reasonable Alternative 1a:** Existing Local Plan plus limited Green Belt release. **Reasonable Alternative 1b:** Existing Local Plan and Local Plan Review Urban sites. Removes UKC Hub from site allocations to show comparison with baseline with some Green Belt release		**Reasonable Alternative 2a:** Existing Local Plan plus limited Green Belt release AND **2,000** at UKC Hub. **Reasonable Alternative 2b:** 2,000 at South of A45; **Reasonable Alternative 2c:** 2,000 at Balsall Common (1 of 3 broad locations surrounding settlement).			**Reasonable Alternative 3a** 2,500 at UKC Hub AND 700 at Amber Sites **Reasonable Alternative 3b** 2500 at South of A45 AND 700 at Amber Sites **Reasonable Alternative 3b** 2500 at Balsall common AND 700 at Amber Sites			**Reasonable Alternative 4a** 2,500 at UKC Hub, AND 700 at Amber Sites AND 3,000 at South of A45. **Reasonable Alternative 4b** 3,000 at Balsall Common (1 of 3 broad locations surrounding settlement, or mixture of all 3).		**Reasonable Alternative 5a** 2,500 at UKC Hub, AND 700 at Amber Sites AND 3,000 at South of A45 AND 3,000 at Balsall Common. **Reasonable Alternative 5b** 6,000 at Balsall Common		**Reasonable Alternative 6a:** 2,500 at UKC Hub, AND 700 at Amber Sites AND 3,000 at South of A45 AND 9,000 at Balsall Common.
Windfall (2022-2036)	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
Urban Area Focus (Commitments / SHELAA / Local Plan sites)[16]	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Urban Area Focus (Local Plan Review Sites) [17]	450	450	450	450	450	450	450	450	450	450	450	450	450
SUBTOTAL	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*	*7,650*
Limited Green Belt release (Local Plan review sites + Green Belt SHLAA)[18]	5,380	0	5,380	5,380	5,380	5,380	5,380	5,380	5,380	5,380	5,380	5,380	5,380
HS2 Growth – Site 19 (Arden Cross)	/		500			1000			1000	1000	1000	1000	1000

[16] Existing commitments (from 2020 not 2021): Planning permission, Local Plan Sites, SHELAA, BLR sites
[17] The following are non Green Belt sites: 7, 15, 17, 18 = (450)
[18] The following are Green Belt sites: 1, 2, 3, 4, 6, 8, 9, 10, 12, 16, 21, 22, 23, 24, 25, 26 = (5,220) = Green Belt Sites (160)

UK Central Hub – (NEC site in BLR)	/		1500			1500			1500	1500	1500	1500	1500
SUEs - Amber Sites[19]	/	/	/			500	500	500	500	500	500	500	500
GL Hearn Urban Expansion - South of A45	/	/	/	2000			2500		3000		3,000		3,000
GL Hearn New Rural Settlement – Balsall Common	/	/	/		2000 (N/W/E)			2500 (N/W/E)		3,000 (N/W/E)	3,000 (N/W/E)	6,000 (N/W/E)	6,000 (N/W/E)
TOTAL	13,030	7,650	15,030	15,030	15,030	16,030	16,030	16,030	19,030	19,030	22,030	22,030	25,030
TOTAL	**Local Housing Need**		**HMA Allowance**			**Needs +**			**Needs ++**		**Needs +++**		

[19] This is actually more like 700 dwellings, but for the sake of rounding it's included as 500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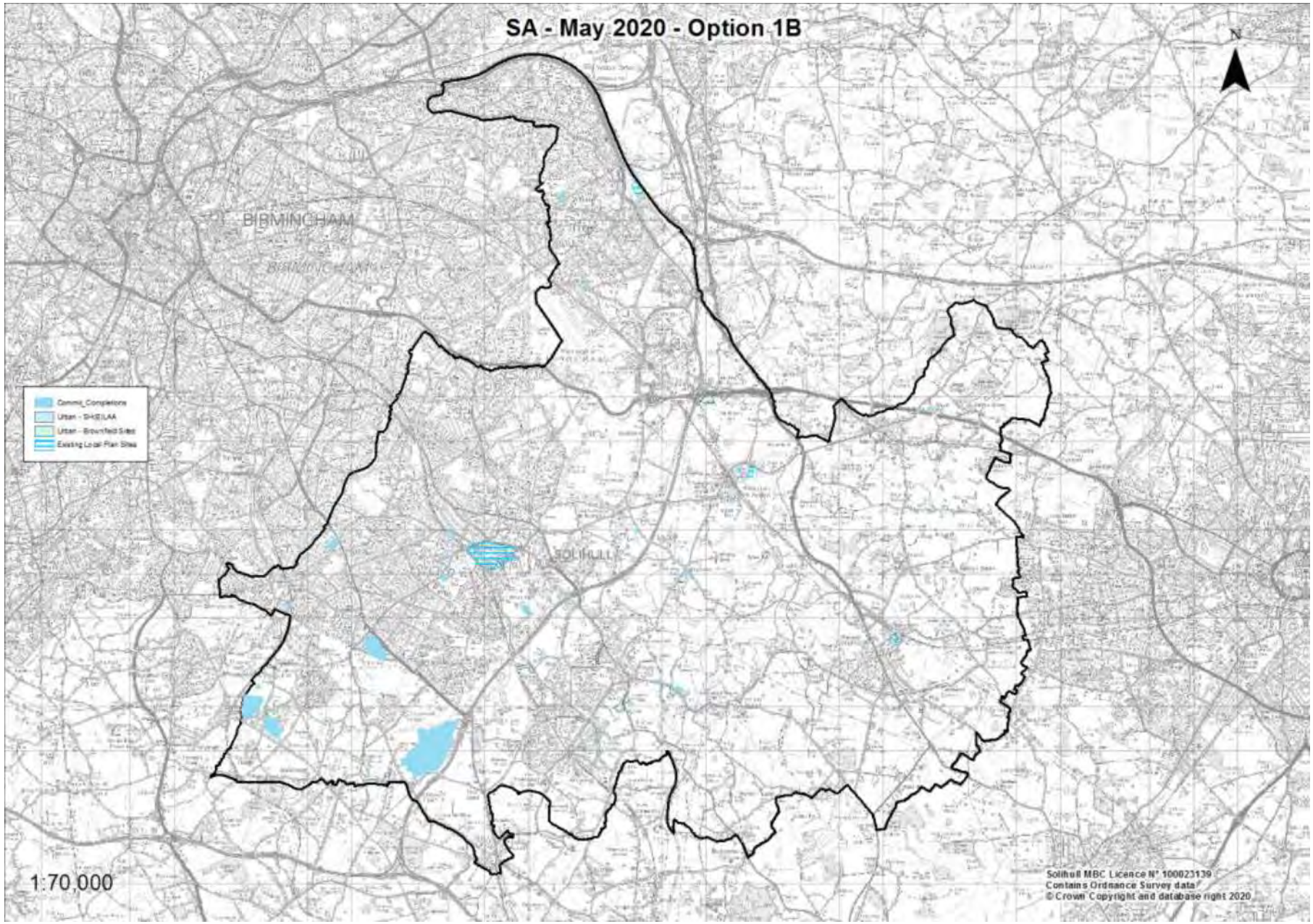
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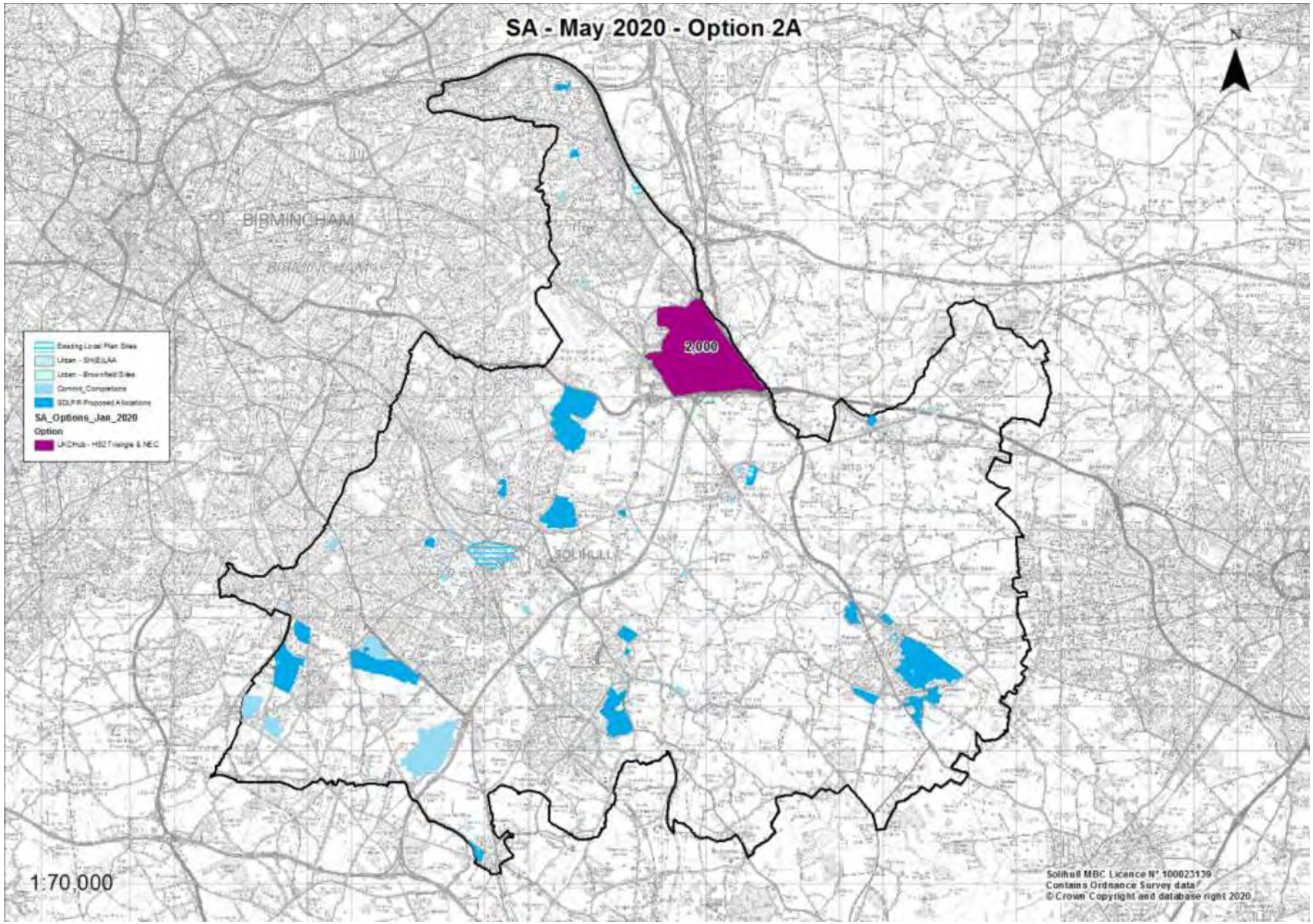
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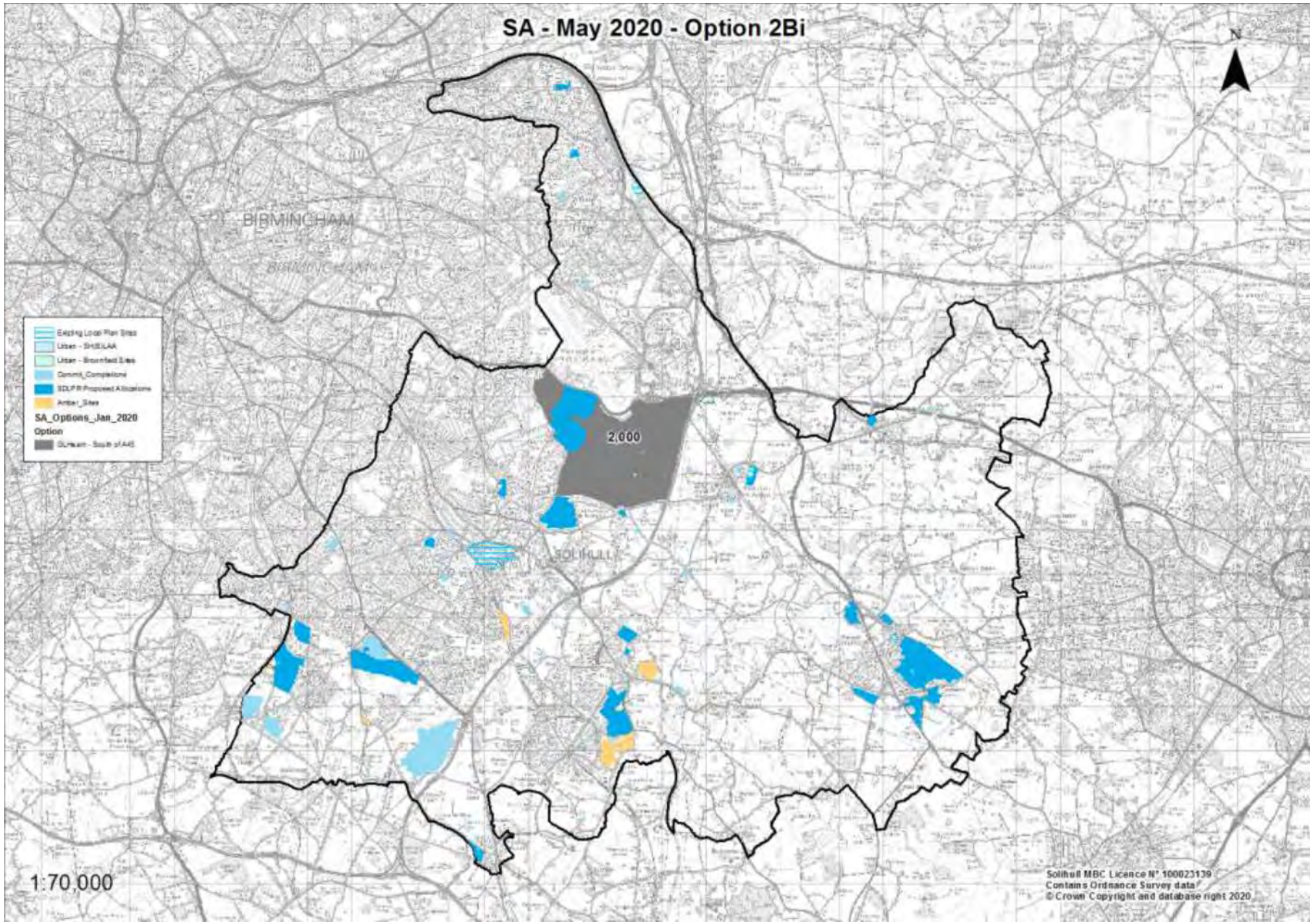
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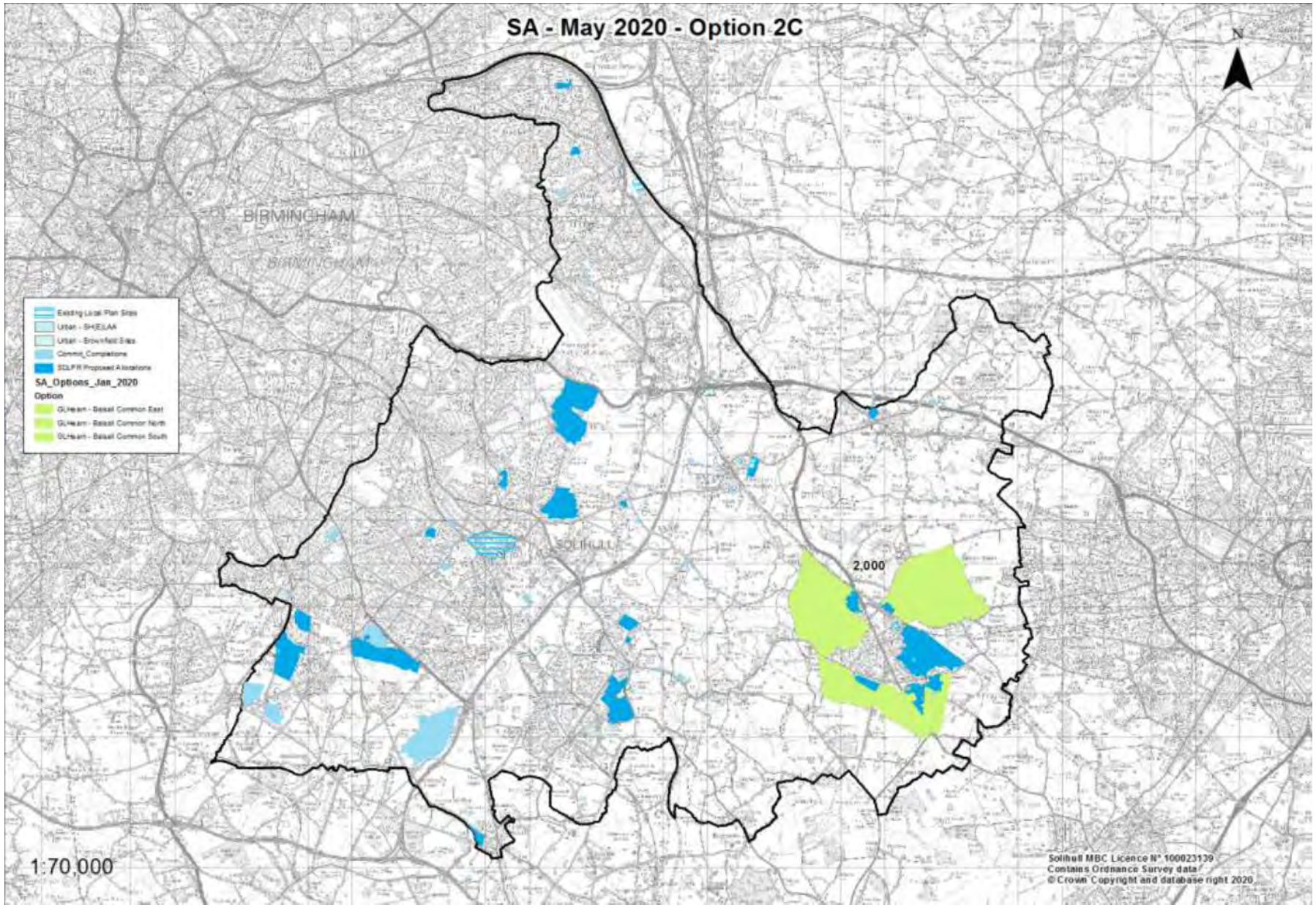
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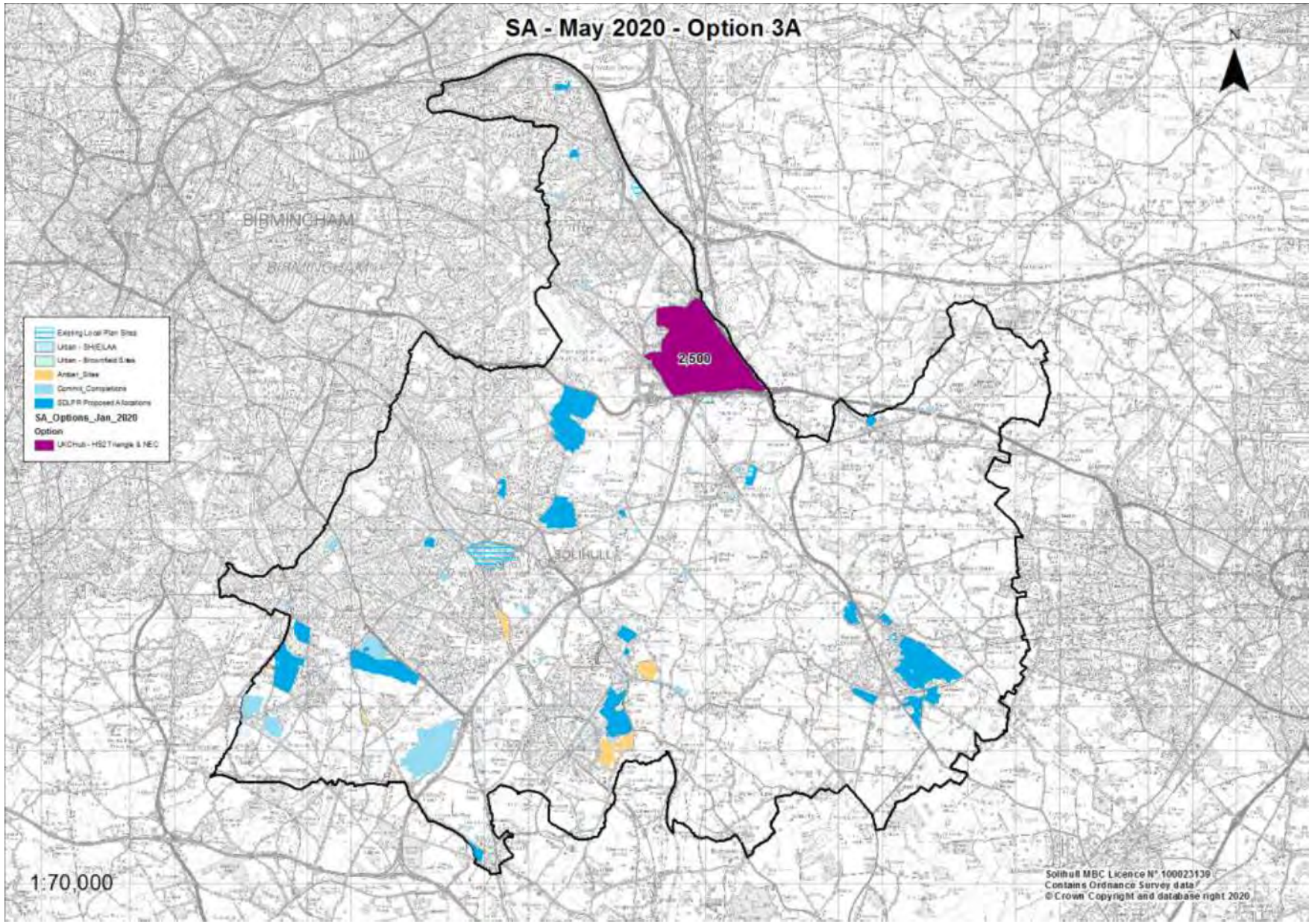
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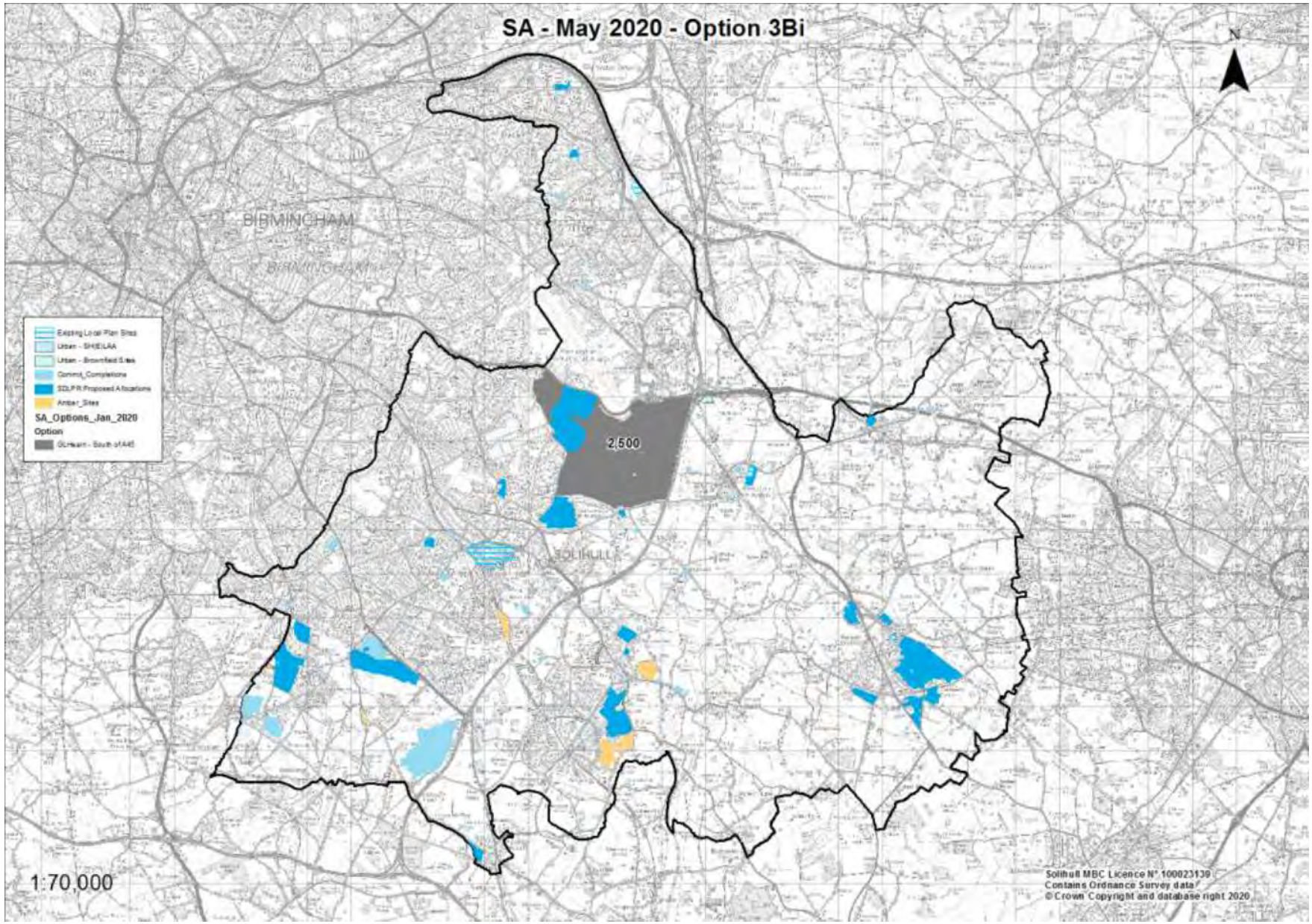
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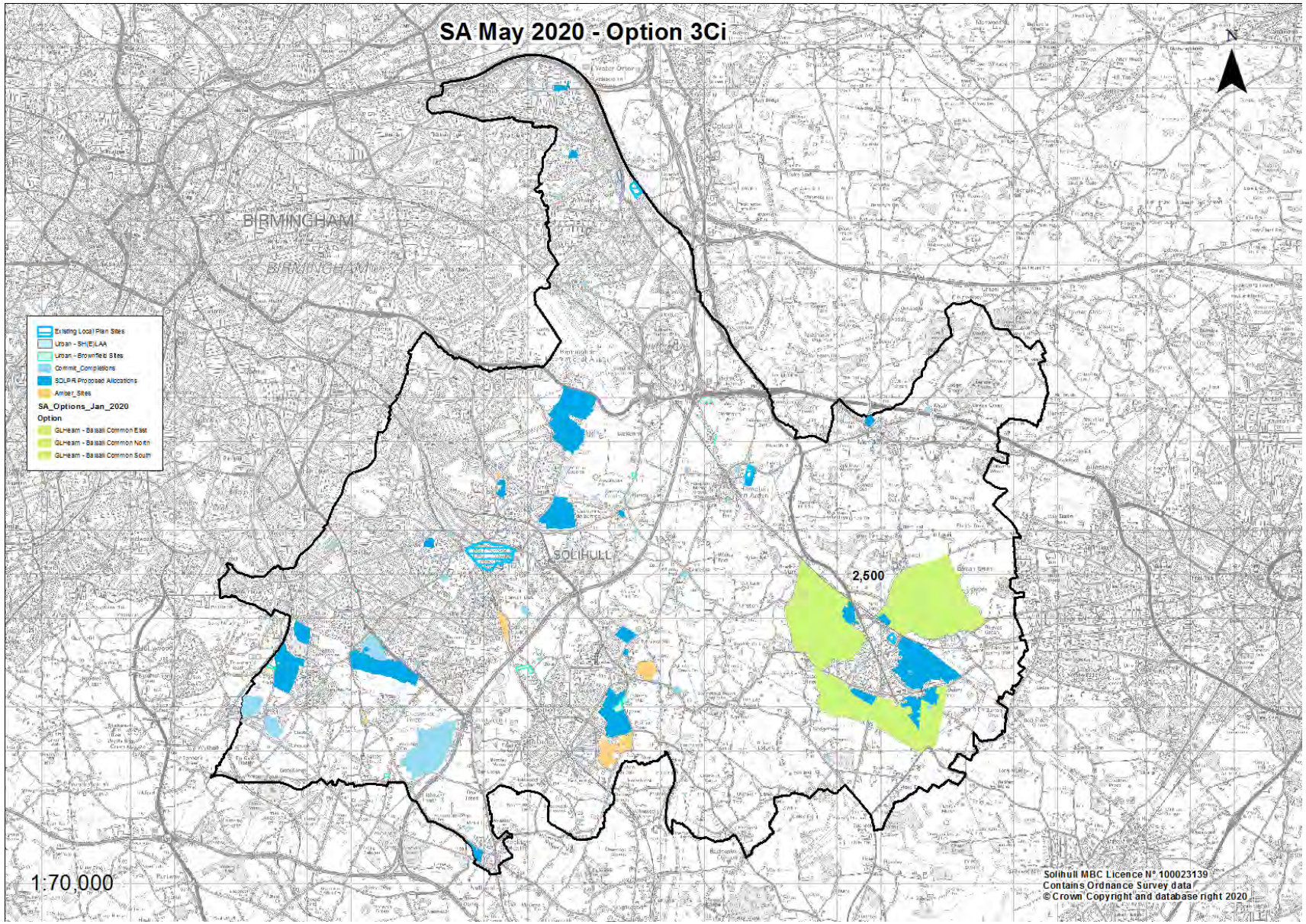
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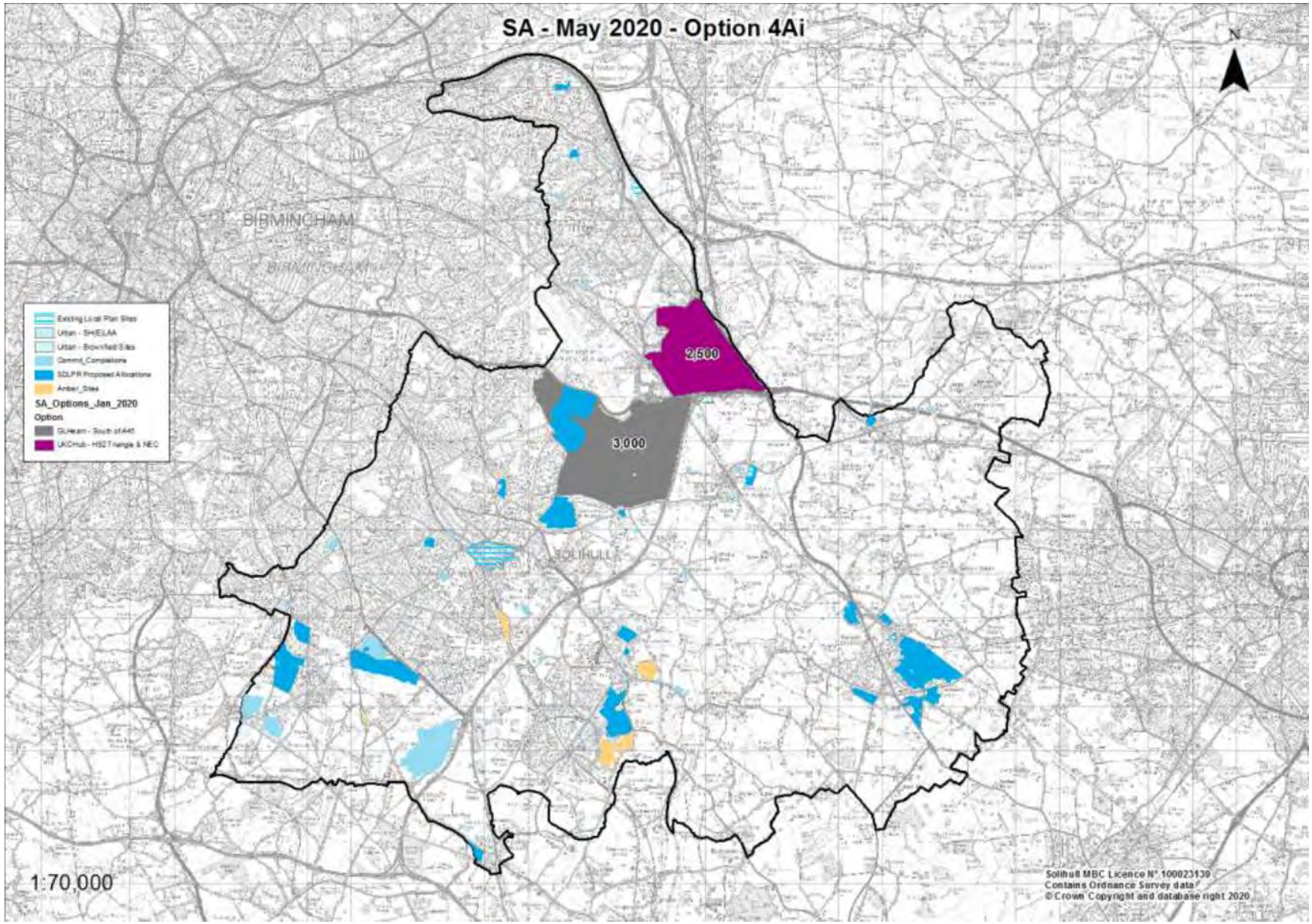
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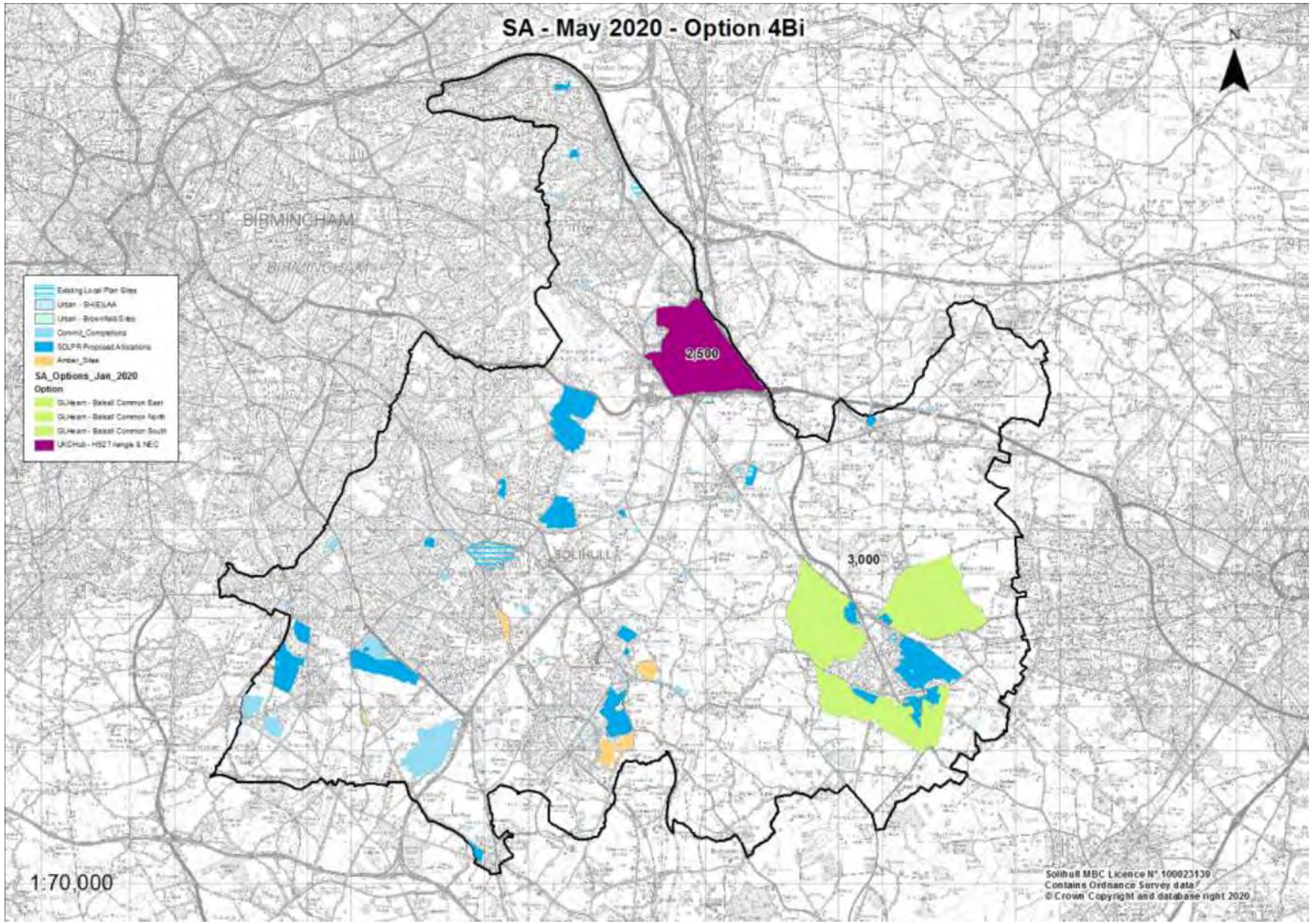
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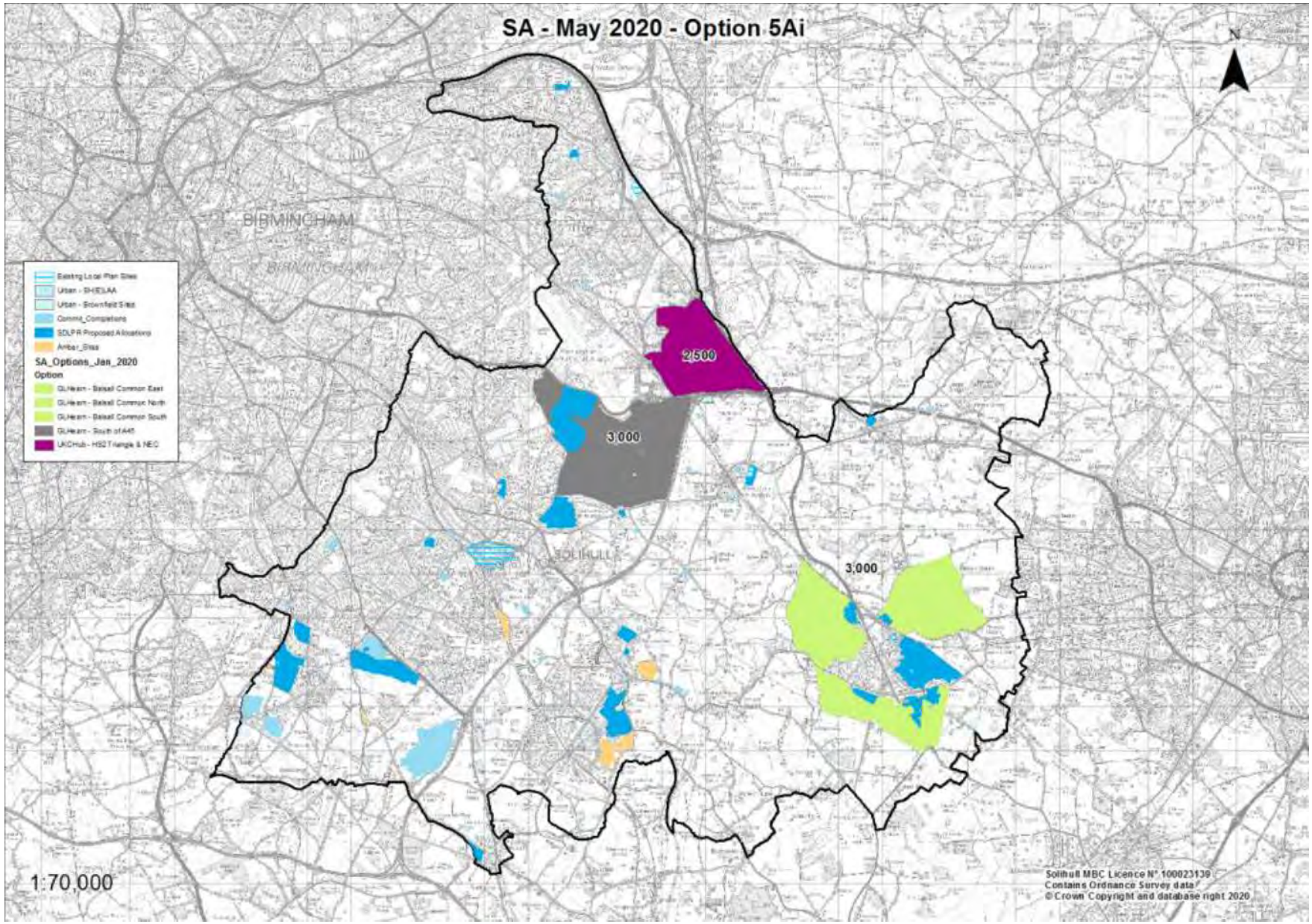
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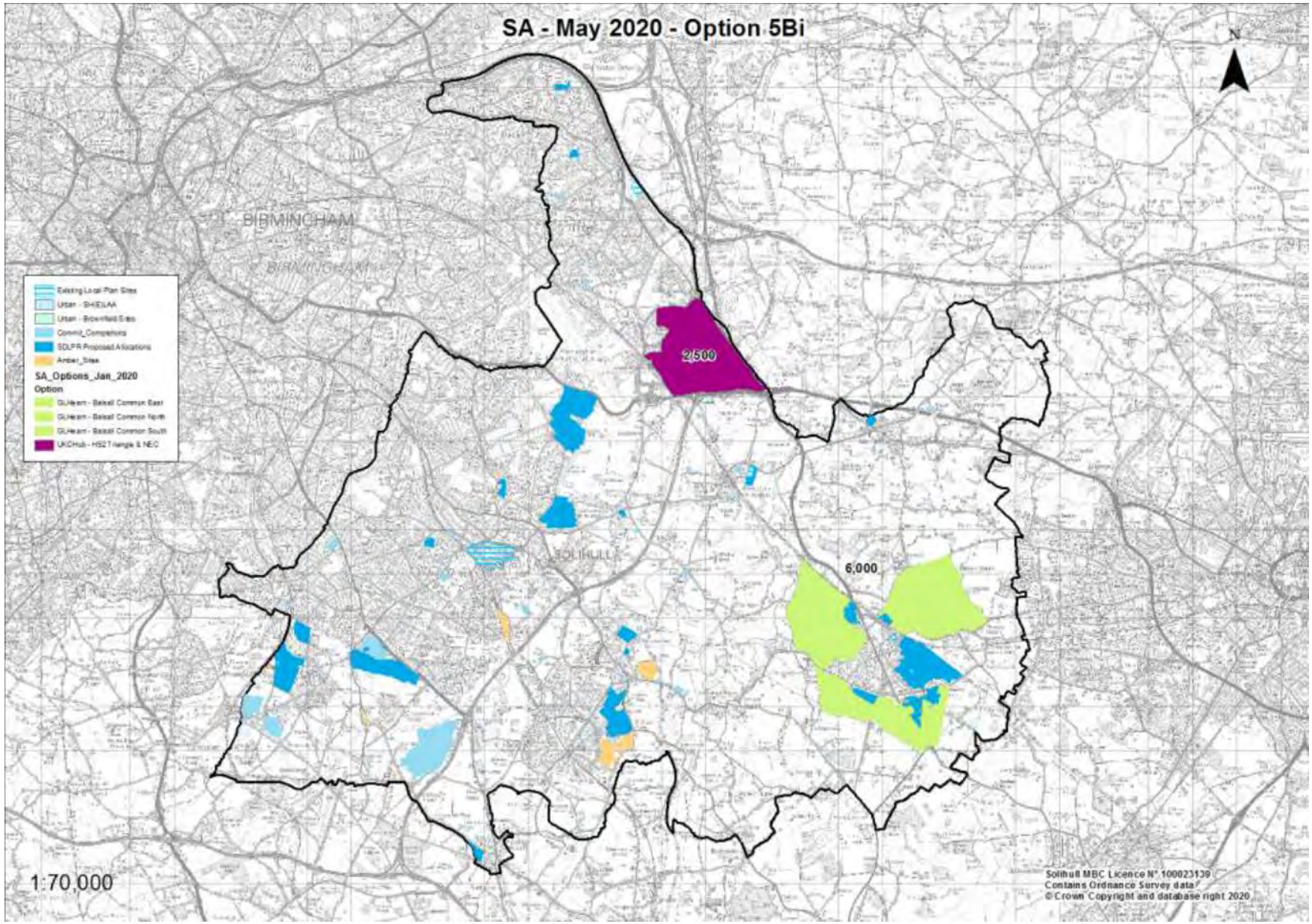
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GLHearn - Balsall Common South
UKCHub - HS2 Triangle & NEC
1:70,000
Solihull MBC Licence N° 100023139
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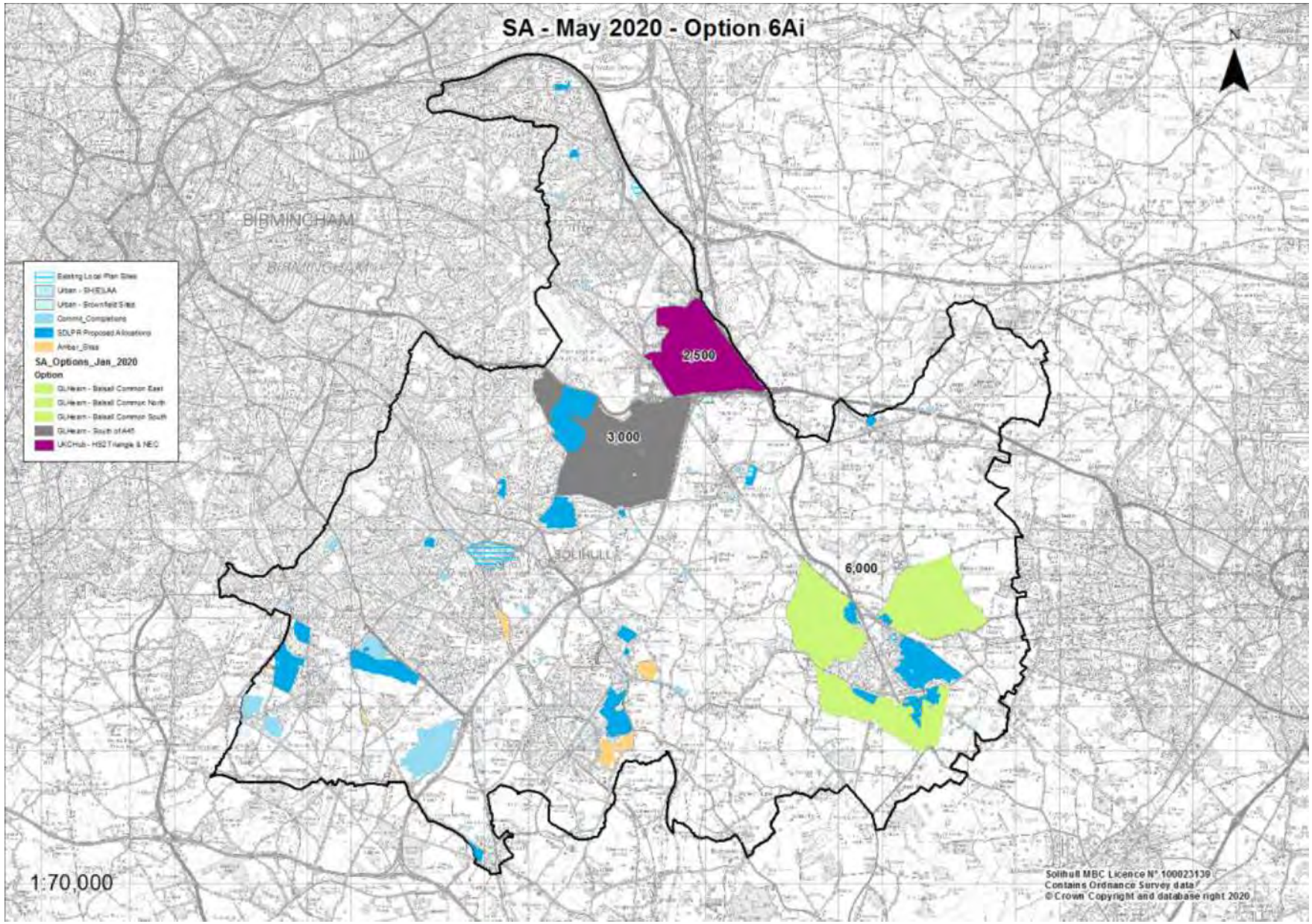
SA - May 2020 - Option 6Ai
N
BIRMINGHAM
SOLIHULL
2,500
3,000
6,000
Existing Local Plan Sites
Urban - SHELAA
Urban - Brownfield Sites
Comms_Completions
SDLPR Proposed Allocations
Amber_Sites
SA_Options_Jan_2020
Option
GLHearn - Balsall Common East
GLHearn - Balsall Common North
GLHearn - Balsall Common South
GLHearn - South of A45
UKCHub - HS2 Triangle & NEC
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5.5 Summary of Appraisal Findings

5.5.1 The thirteen reasonable alternative strategies for housing growth and distribution identified at this stage have been appraised using the SA Framework. The full appraisal tables can be found in **Appendix D**, with a summary provided below and within Table 4.4.

Growth Scenario - Option 1 (Meet needs)

5.5.2 Option 1a seeks to meet local needs and provides an element of flexibility, which brings about significant positive effects in terms of employment and housing. The distribution is also focused on areas that should have significant benefits with regards to accessibility. In addition, a range of minor positive effects are predicted in terms of health, social inclusion, regeneration and the built environment. There are no significant negative effects predicted at this scale of growth, but minor negatives could occur in terms of environmental factors such as biodiversity, landscape, and historic environment. For remaining objectives there are neutral or mixed (minor positive / minor negative effects)

5.5.3 For this scenario, option 1b would avoid Green Belt release. This means that the environmental effects are much less compared to any other option. However, it brings about significant negative effects in terms of housing. The picture for most other sustainability topics is neutral, which suggests a passive approach rather than a proactive one. In terms of the growth that is focused in the urban areas and along transport corridors, this is significantly positive in terms of transport.

Growth Scenario – Option 2 (HMA allowance)

5.5.4 At a higher scale of growth, the significant positive effects associated with housing and economy remain. For options 2a and 2b, significant effects also arise in terms of regeneration and social inclusion given the role that the HS2 / UK Central Hub focus could have.

5.5.5 At this level of growth though there are mixed effects on transport for each distribution option. Whilst the positive effects associated with the urban focus remain, large concentrations of growth in broad locations could increase traffic on local roads.

5.5.6 At this level of growth each of the distribution options perform similarly under the climate change and energy and the natural resource protection themes and there is little change when compared to scenario 1. Flooding presents an uncertain effect for all options as there are some locations that could present issues

5.5.7 The effects on landscape are similar to those under scenario 1a, as it ought to be possible to mitigate impacts at the broad locations. Each option therefore has minor negative effects.

5.5.8 However, the effects upon other environmental factors become more pronounced at this scale of growth for some of the options. Option 2b for example could generate significant negative effects with regards to biodiversity and the historic environment. For option 2c, these environmental effects remain minor.

5.5.9 Conversely, options 2a and 2b could potentially start to generate significant benefits with regards to health and the built environment.

5.5.10 In terms of accessibility, each options still has positive effects related to the urban focus / transport hub approach. Options 2a and 2b build upon this, whereas 2c could lead to new communities in less accessible locations.

5.5.11 At this scale of growth, the options have lots of similarities in terms of sustainability performance. The main differences relate to options 2a/2b which focus growth north of Solihull, and Option 2c which places it at Balsall Common.

5.5.12 Options 2a and 2b could create more concern with regards to heritage (and biodiversity for 2b), but are more likely to bring about greater positive effects in terms of regeneration, the built environment and regeneration (particularly option 2a). Whilst option 2c does not generate any significant negative effects, the socio-economic benefits are lower and some development would be poorer in terms of accessibility. There could also be more concern with regards to health / amenity due to disturbances to existing communities.

Growth Scenario – Option 3 (HMA allowance +)

5.5.13 At this scale of growth, the effects are very similar to the corresponding options under scenario 2. The additional 1000 dwellings involved should therefore be possible to accommodate without generating further significant effects that would not arise under scenario 2.

5.5.14 The key differences are as follows:

- All options have a minor negative effect in terms of resource efficiency which would result in greater generation of waste overall.
- The addition of urban extension sites could generate amenity / health issues for existing communities.
- Increased growth at the broad locations would make negative effects more likely to occur, removing some uncertainty. For example, for Option 2b, the effects on historic environment are more likely.
- Increased growth at the broad locations would make positive effects in terms of regeneration more likely to occur (for example, for option 2b, the uncertainty of significant positive effects arising is removed)

Growth Scenario – Option 4 (HMA allowance ++)

5.5.15 At this scale of growth, the growth at broad locations is enhanced, and therefore effects are exacerbated for some sustainability topics. In particular, major significant positive effects are predicted for housing, given that a large proportion of unmet needs from the HMA could be met. Option 4a sees the greatest shift in positive effects, with major benefits also arising in terms of regeneration, employment, social inclusion, health and accessibility.

5.5.16 Option 4b fares less well in these respects as the Balsall Common location does not deliver growth in areas of greatest need and accessibility.

5.5.17 Conversely, at this level of growth, the effects on resource efficiency and pollution become significantly negative for both options.

5.5.18 This scale of growth also sees a more negative effect upon climate change and energy across each option (but this would offset effects in the HMA). For option 4a, there are also greater negative effects upon environmental factors including landscape and the historic environment.

Growth Scenario – Option 5 (HMA allowance +++) and Option 6

5.5.19 Similar to Option 4a, Option 5a also involves significant growth at the north of Solihull, which constitutes major significant positive effects in terms of socio-economic factors. However, at this increased scale of growth some minor negative effects also arise for some communities.

5.5.20 The same pattern of effects also occurs for option 5a comparted to option 4b. The positive effects remain largely the same, but negative effects arise.

5.5.21 At this level of growth, the effects on resource efficiency become major significantly negative for 5a, 5b and 6. This relates to increased resource use in Solihull, but would offset effects outside the Plan area.

5.5.22 Likewise, this scale of growth sees a more negative effect upon climate change and energy across each option.

5.5.23 For each option, there are greater negative effects upon environmental factors that are less likely to be avoidable. This is particularly the case for the historic environment for all options, landscape for Option 6, and biodiversity for Options 5a and 6. The potential for increased pollution also rises for all options, and impacts on accessibility are significantly negative where major growth occurs at Balsall.

5.5.24 At these very high scales of growth, there are a multitude of significant negative and positive effects. However, it should be noted that this could offset effects elsewhere in the HMA. The nature and extent of effects will also be highly dependent upon the layout and design of growth at strategic locations. With a strong green infrastructure led approach, with appropriate phasing to ensure utilities and road infrastructure is in place, the effects may well be more positive (rather than negative). An important question that remains is whether the effects of additional growth being directed to Solihull would be more or less ‘sustainable’ when compared to alternative locations within the HMA. This is beyond the scope of the Solihull Local Plan though.

Table 5.4: Summary of Appraisal Findings for spatial options

Topic	Table 4.4 Summary of Options Assessment	Option 1 13,000 dwellings Meet Needs		Option 2 15,000 dwellings HMA allowance			Option 3 16,000 dwellings HMA allowance +			Option 4 19,000 dwellings HMA allowance ++		Option 5 22,000 dwellings HMA allowance +++		Option 6 25,000 dwellings HMA allowance ++++
		1a	1b	2a	2b	2c	3a	3b	3c	4a	4b	5a	5b	6
Sustainable consumption and production	1. Regeneration	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓✗?	✓✓✗?	✓✓✓✗✗?
	2. Employment	✓✓	-	✓✓	✓✓	✓✓?	✓✓	✓✓	✓✓?	✓✓✓	✓✓✗	✓✓✓✗	✓✓✗✗	✓✓✓✗✗
	3. Transport and infrastructure	✓	✓✓	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓✗	✓✗	✓✗✗	✓✗✗	✓ ✗✗✗?
	4. Resource efficiency	-	✓	-	-	-	✗	✗	✗	✗✗	✗✗	✗✗✗	✗✗✗	✗✗✗
Climate change and energy	5. Greenhouse gases	-	-	?	-	-	?	-	-	? ✗	? ✗	? ✗✗	? ✗✗	? ✗✗
	6. Business resilience to	?	?	?	?	?	?	?	?	?	?	?	?	?
	7. Flooding	-	-	?	?	?	?	?	?	✗?	✗	✗?	✗?	✗?
	8. Climate change adaptation	-	-	-	-	-	-	-	-	✗?	✗?	✗?	✗?	✗?
Natural resource protection and environmental enhancement	9. Biodiversity	✗	-	✓?	✗✗	-	✓?	✗✗	-	✓? ✗✗	✓?	✓? ✗✗✗?	✓? ✗	✓? ✗✗✗
	10. Landscape	✗	✓?	✗	✗	✗	✗	✗	✗	✗✗	✗	✗✗	✗✗	✗✗✗
	11. Green Infrastructure	✓✗	-	✓ ✗	✓✗	✓✗	✓✗	✓✗	✓✗	✓✓?✗✗?	✓? ✗?	✓✓?✗✗?	✓✓? ✗✗?	✓✓? ✗✗?
	12. Historic Environment	✗	-?	✗✗	✗✗?	✗	✗✗	✗✗	✗✗	✗✗?	✗✗?	✗✗✗	✗✗✗	✗✗✗
	13. Built environment	✓?	-	✓✓?	✓✓?	✓?	✓✓?	✓✓?	✓?	✓✓✓?	✓✓?✗	✓✓✓?✗	✓✓?✗✗	✓✓✓?✗✗
	14. Pollution	✓✗	✓	✓✗	✓✗	✓✗	✓✗	✓✗	✓✗	✓✗✗?	✓✗✗	✓✗✗	✓✗✗✗	✓✗✗✗
Sustainable Communities	15. Social inclusion	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓✗?	✓✓ ✗?	✓✓✓✗✗?
	16.Housing	✓✓	✗✗	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓✗?	✓✓✓✗?	✓✓✓✗?
	17.Health	✓	-	✓✓?	✓✓?	✓✗?	✓✓ ✗?	✓✓ ✗?	✓ ✗?	✓✓✓✗?	✓✓ ✗?	✓✓✓ ✗?	✓✓ ✗?	✓✓✓ ✗✗?
	18. Crime	✓✗?	✗	✓✗?	✓✗?	✓✗?	✓✗?	✓✗?	✓ ✗?	✓✓? ✗?	✓ ✗?	✓✓? ✗	✓ ✗	✓✓? ✗
	19. Accessibility	✓✓	✓✓?	✓✓✓?	✓✓	✓✓ ✗	✓✓✓?	✓✓	✓✓ ✗	✓✓✓	✓✓ ✗	✓✓✓✗	✓✓✓✗✗	✓✓✓✗✗

5.6 Outline reasons for the selection of the preferred approach

5.6.1 The spatial strategy correlates with Option 2a described above. The housing growth target is therefore 15,017 dwellings, which builds upon the draft Local Plan approach, but increases growth at the UK Central Hub.

5.6.2 The spatial strategy proposed is based on developing the potential of each part of the Borough to contribute to the growth agenda. This involves:

- realising the full potential of the UK Central Solihull Area to drive growth;
- recognising the needs and growth potential of all communities in the Borough;
- balancing the need for growth with the importance of protecting character and distinctiveness; and
- recognising the importance of the Green Belt, especially the strategically important parts in the Borough.

5.6.3 Broad options for growth were set out in the Scope, Issues and Options document in 2015, based on the GBSLEP Spatial Plan for Growth, and each of the options have been investigated to deliver the housing and other growth proposed. Options E, F and G were explored in further detail in the Options for Growth and Site Selection Topic Paper published in 2016, which sets out the reasons for taking forward or rejecting various areas.

5.6.4 Various Growth Options have been considered, as set out in the SA, which take account of recommendations for further work in the GBBCHMA Strategic Growth Study, 2018. The SA sets out the potential adverse consequences of higher levels of growth over and above the level chosen.

5.6.5 Distribution of growth has focussed on centres and areas of opportunity, notably the UK Central Solihull Hub Area and the area around the HS2 Interchange Station, which has been highlighted nationally as having significant potential to drive growth. In addition, opportunities have been found around transport hubs, including rail stations at Berkswell, Dorridge, Shirley and Whitlock's End. Urban extensions to Solihull and Shirley, and significant expansion of larger settlements at Balsall Common, Knowle/Dorridge and Dickens Heath are also proposed. A number of smaller sites within the urban area and extending smaller settlements are also included.

5.6.6 The SHELAA assesses the potential a large number of Call for Sites submissions across the Borough, although the vast majority are located in the Green Belt, and many are remote from existing settlements and services. These have informed the site allocations and a handful of sites are expected to be suitable for development and have been counted in the land supply. The Site Assessment document 2019 includes an assessment of all the submissions received and is being updated to reflect more recent submissions.

5.6.7 The GBBCHMA Strategic Growth Study recommended investigating options for growth south of the A45 and around Balsall Common.

5.6.8 The Local Plan Review includes an employment allocation, Site 20, off Damson Parkway but further growth in this area would have an adverse impact and landscape and biodiversity.

5.6.9 A number of housing sites are proposed around Balsall Common, but additional more significant growth would have an adverse impact on the Green Belt and the strategically important Meriden Gap, increasing the need to travel and on landscape and biodiversity.

6. Appraisal of Broad Locations

6.1 Introduction of future potential strategic development locations for housing growth

6.1.1 As part of the Local Plan Review Solihull Metropolitan Borough Council is considering additional broad locations for development over the plan period 2020-2036. The study identified several broad locations for growth within the Solihull Borough. These are as follows (see figure 6.1);

- South of the A45
- Balsall Common South
- Balsall Common North
- Balsall Common East

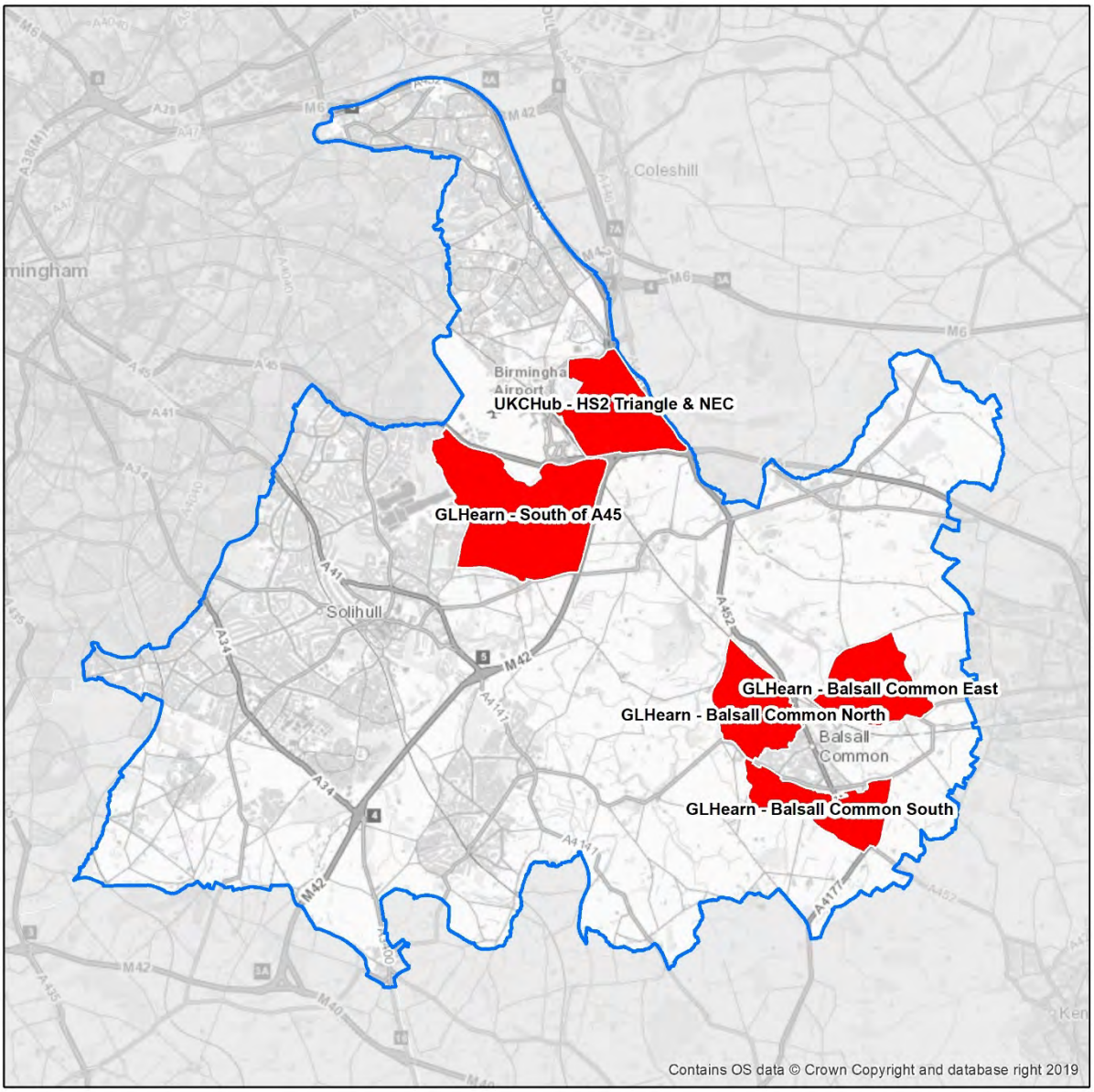
6.1.2 In addition to UK Central Hub /HS2, each of these strategic locations form an important part of the overall spatial options (discussed in Chapter 5 of this SA Report), whether this be individually or in combination with one another (E.g. at higher levels of growth).

6.1.3 This chapter sets out an appraisal of the key constraints and opportunities associated with these broad locations when considered individually on their own merit. This has also helped contribute to the wider appraisal of spatial options from a borough-wide perspective.

6.1.4 Each broad location is introduced in this section, followed by an appraisal against the nineteen objectives of the SA framework.

6.1.5 For completeness, an appraisal of the broad locations has also been undertaken against the site appraisal framework; which allows for a 'consistent' comparison with other site options across the borough. The proformas for each site can be found at **Appendix E** alongside all other site options.

Figure 6.1: Broad locations for growth



6.2 Site South of the A45 – AECOM ID 135/SMBC Ref 335

6.2.1 This broad location is approximately 660 Hectares of Green Belt land, at the eastern limit of the built edge of the Birmingham conurbation. Its boundary is formed by the A45 to the North, the M42 (between A45 and B4102) to the East, the B4102 (between

6.2.2 M42 and Damson Parkway) to the south, Damson Parkway-Damson Lane to south west and Elmdon Park to the West and Irving Road-Goodway Rd at its north west tip. The broad location abuts Birmingham airport and the NEC to the North. It is surrounded by key road corridors namely; the M6, A45 and M42 orbital. The village of Catherine-de Barnes is adjacent to the southern boundary of the broad location, whilst the Jaguar-Land Rover factory is to the west.. The eastern most boundary of the location is just under a mile from Solihull's High Street.

6.2.3 The Draft Local Plan Supplementary Consultation: Site Assessments (dated January 2019) indicates that the SHELAA did not assess the broad location for residential use[20].

6.2.4 The GBHMA Strategic Growth Study considers the site (Reference as Site Number 22 South of Birmingham Airport/NEC) South of Birmingham Airport/NEC will be an Employment Led Strategic Development. The growth study indicates that an Employment Led Strategic Development means the following:

- Strategic employment areas with a key employer and/or clustering of employers
- Housing of the range of urban extensions (1,500 to 7,500 dwellings).
- Likely to be located adjacent to, or in the vicinity of, a Motorway junction.
- This model concerns existing strategic sites as a focus for additional housing development in the broad vicinity and does not consider potential for further employment provision. A detailed analysis of existing and potential strategic employment areas is presented in the West Midlands Strategic Employment Sites Study (PBA, Sept 2015).
- The Employment Led development model would support delivery of a range of housing types and tenures, including the provision of affordable housing. The development model would also support the delivery of facilities, services and employment to support the needs of future residents

6.2.5 We have applied the assumptions of the GBHMA study to the site assessment below.

[20] https://www.solihull.gov.uk/Portals/0/Planning/LPR/Draft-Local-Plan-Supplementary-Consultation-Site-Assessments.pdf SMBC Site Reference 335 - Page 149

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Sustainable consumption & production; 1-To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived: 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 in 'need') benefit from opportunities brought by HS2 and UK Central.	There is relatively little deprivation evident in the area. According to the multiple indices of deprivation 2019 (figure 2.2), the majority of the site is within the 50% most deprived neighbourhoods in the country and a smaller portion at the north western tip of the site is within the 40% least deprived. Therefore, in terms of contributing to regeneration and economic development targeted at specific community groups the site is likely to have a limited effect in the immediate area. However, provision of well-designed housing and infrastructure here is likely to help attract and retain well-educated members of the work force, particularly when considering the wider region's housing shortage and substantial employment opportunities that surround the site such as, Birmingham International airport, the NEC, Jaguar-Land Rover, and employment opportunities within greater Birmingham and the Black Country. The site's proximity to a major airport may deter some from choosing to live here, this is particularly relevant to the northern part of the site which abuts the airport and the Jaguar-Land Rover site. However, the presence of substantial residential developments just to the north of the airport indicates this is unlikely to detract potential developers wanting to build here and residents from moving to the area. Therefore, this aspect of the broad location is unlikely to adversely impact the attractiveness of residential developments here and the site is predicted to have a ***positive*** effect with respect to (1a). The site is surrounded by strategic transport infrastructure including motorways, major railway lines linking to London (including the planned HS2 hub in Solihull), the midlands and further afield. Additionally, the site is surrounded by major employment sites such as the airport, NEC and the Jaguar-Land Rover site. Given the substantial size of the site, future urban development here is likely to comprise residential and some employment uses (including offices). The Birmingham and Blythe Business Parks supported by SMBC will further help provide offices to meet the needs of start-ups and larger businesses. The strategic location of the site near the planned HS2 station and as part of the area designated as UK Central is likely to support economic growth and create employment opportunities which should benefit communities with high levels of deprivation to the north and north west of the site. Therefore, this site is predicted to have a ***positive*** effect on part (1b) and (1c) of this SA topic.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	Overall, this broad location is likely to have **moderate positive effects** with regards to regeneration and economic development.
Sustainable consumption & production; 2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.	There is relatively little deprivation within this broad location, so those most at need of accessing jobs and services are unlikely to be most likely to benefit from any development. However, the site is relatively well located in relation to existing and planned employment growth, meaning that new communities should not be any more likely to experience difficulty in accessing jobs. The growth in housing and employment brought about by development in this area could make public transport, e.g. bus routes more commercially viable, making it easier for residents in areas further afield, to access new job and training opportunities within this location and for new communities in this area to have access to opportunities throughout Solihull and Greater Birmingham. There is a degree of uncertainty in this respect though as it depends on infrastructure being secured. The broad location is considered to be in proximity to existing public transport. It is assumed that a contribution to delivering social infrastructure such as schools is made. The area is currently not readily accessible to existing primary and secondary schools. The scale of growth involved would likely support new primary schools, but perhaps not a new secondary school. In view of these factors, this broad location is likely to have **minor positive effects** with regards to reducing the number of people experiencing difficulties in accessing employment, education and training opportunities.
3. To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.	The broad location is broadly well served by key road corridors namely; the M6, A45 and M42 orbital. Birmingham airport is adjacent to the northern boundary of site. There is a proposed HS2 railway station just to the north east of the site. Birmingham International railway station at the NEC links the area to London and the rest of the country. Therefore, development here facilitates the use of the strategic transport / travel infrastructure available in vicinity of this site. The potential for infrastructure to be put under undue pressure also exists, but this depends upon the scale of growth involved in this location and also nearby. At this stage, it is considered that the location should have **positive effects** in terms of this SA objective.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
4. Minimise the use of natural resources, such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling: 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.	The broad location is entirely within the green belt and the majority of it is greenfield. Most of the area is Grade 3 agricultural land, with the north western tip being non-agricultural (urban). There are around 92 hectares of Grade 3a land; classed as best and most versatile agricultural land (BVM) in the western half of this broad location. There is a parcel of Grade 2 (BVM) land just north Catherine-de-Barnes comprising an area of around 21 ha. These areas represent about 17% of the total area of the site. Therefore, purely in terms of preserving the natural resource of agricultural land and soils; development in this location could potentially have a **moderate negative effect.** Avoidance of more sensitive areas should be possible though. As the majority of the location consists of greenfield land; using previously developed sites is not a possibility here. The loss or gain of ecological value on the site is dependent upon existing value and the approach taken to avoid and mitigate impacts, then to achieve a net gain. It is likely that some negative effects could occur, but the scale and nature of the site ought to offer opportunities for mitigation and enhancement. In terms of water, new development in any location will increase demands for water resources. Provided that development is well-planned and supported by infrastructure, effects are likely to be neutral. Similarly, the picture with regards to waste is also neutral. Materials will be required to support development, and new development will generate waste that needs to be managed. This is the case regardless of location though. Overall, the effects of development in this broad location are likely to be **moderate negative effects**, mainly due to impacts upon agricultural land.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Climate change & energy; 5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation: a. Deliver reductions in greenhouse gas emissions to contribute to the national and local target. b. Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.	Vehicular transport is one of the biggest contributors to greenhouse gases (ghg) emissions. The scale of development likely to take place in this location will create additional vehicular traffic and therefore increase carbon emissions in what is currently a largely rural area. However an increase in vehicular travel is likely with any growth. What is of critical importance is the likelihood that new communities will be more or less likely to switch to sustainable modes of travel and take shorter car trips. In this respect, the area of growth is in the vicinity of Birmingham International train station and Birmingham Airport, both of which, are well served by a network of buses linking them to the rest of Birmingham, Solihull and further afield. The existing public transport infrastructure will be further bolstered by HS2 linking Birmingham to London, with a terminal planned in Solihull. These services are likely to enhance public transport services around them and therefore should encourage more residents and businesses to use more sustainable forms of transport, such as, buses, trains and bicycles. From this respective, neutral effects are predicted in terms of vehicular emissions (whilst there could be some increase I car travel, the site is relatively well located in terms of strategic public transport, which offsets the negatives. The size of the site is likely to engender substantial development. The scale of this will help make more efficient forms of energy consumption and distribution; such as, District Heating systems, more viable. However, there are no clear opportunities identified in this location. With regards to the design and layout of development, the extent to which low carbon development can be achieved depends on multiple factors, including viability, and the ability to implement enhanced standards. New development is likely to be of a higher standard than existing stock though, so should help to ensure carbon emissions from new developments are minimised. Taking all the above factors into consideration **minor negative effects** are predicted in relation to development in this broad location. On one hand, development per se will lead to increased emissions and energy usage. However, the standard of development is likely to be higher than current stock, so this facilitates a move in the right direction.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.	This is largely dependent on how development on the site is designed and whether there are links to businesses. There are no specific constraints or features at this broad location that would lead to positive or negative effects in this respect. Therefore, **neutral effects** are predicted.
7. Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses.	The substantial development involved could reduce permeability and increase surface water runoff. Development will involve substantial agricultural land take. Agricultural lands within catchment areas impact the emergence of flood events through their surface run-off waters. If cultivation has been properly adapted, the fields can, to a certain extent, contribute to flood prevention. Agricultural land may also serve directly as flood plains. However, with the exception of a linear area along Low Brook, the site is within Flood Zone 1 (least likely to flood compared to Zones 2 and 3 where is 3 is most likely to flood). Therefore, new communities are unlikely to be put at significant risk of flooding. It is presumed that a comprehensive SUDs and drainage strategy would be secured, which ought to ensure no net adverse effects in terms of drainage and flood risk downstream. As a result, **neutral effects** are predicted.
8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting behaviour change.	Development on greenfield land on the fringes of the Solihull urban area could potentially contribute to a more pronounced urban heat island effect (given that there would be less greenfield land and more built development that emits heat). However, the size of the site makes lower density development possible, and it also allows the inclusion of green landscaping and green infrastructure which can help with respect to adaptation to urban heating by reducing urban heat island effects. The effects of high winds; such as the venturi effect experienced in spaces between closely built tall blocks, can be mitigated by considering the prevailing wind directions at planning stage and adapting the design of the development to the most appropriate massing and distribution of buildings. Development parcels in this location should allow more flexibility in adapting the density, distribution and massing of built form to minimise effects associated with high winds in the development. Therefore, this site is predicted to have **neutral effects** with regards to climate change adaptation.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Natural resource protection & environmental enhancement 9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	There are several Local Wildlife Sites across the broad location, with a total area of around 170 hectares, representing approximately 26% of the site area. The largest of these is Castle Hill Farm Meadows, others include; Elmdon Nature Park, Elmdon Grange Wood, Elmdon Local Nature Reserve, Kinghurst Brook, Hampton and Elmdon Coppice, Catherine de Barnes Hay Meadow, Green Ward Piece and Wayside Cottage Meadows. There two groups of fields forming the Bickenhill Meadows SSSI designated site. These comprise species rich grassland situated to the south and west of the village of Bickenhill (3.2 ha and 2.5 ha respectively). The meadows comprise one of the richest grassland floras in the county[21] including rare grassland types which have declined very severely nationally. The SSSI is classed as 100% 'Unfavourable Recovering'. The Impact Risk Zones associated with this SSSI extend to cover the majority of the site. The eastern half of the area is habitat to several species of birds including; Lapwing, Corn Bunting, Curlew, Grey Partridge, Redshank and Tree Sparrow. Large scale development has the potential to have significant effects on the wildlife habitats discussed above. This could be through direct loss of habitat, disturbance and fragmentation. However, the very large area should offer opportunities to enhance areas of lower ecological value, avoid sensitive areas and secure mitigation. As a result, whilst **significant negative effects** are possible, they should be possible to avoid. So the overall effects are predicted to be **minor negative** in the short term, and **potentially positive** in the longer term if net gain is secured in this location.
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 site falls within LCA1 Sub Area 1A and includes a number of landscape features including medium to large scale fields bounded by hedgerows and open division with post and wire fencing. The landscape effects are largely dependent on how development on the site is designed. However, the site is considered in the LCA to have medium sensitivity to accommodate change. Therefore, a **minor negative effect** could occur with large scale growth.

[21] Source; Natural England https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002847.pdf

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
11. To facilitate the delivery and enhance the quality of areas providing green infrastructure.	The broad location is well related to existing greenspace (though this is not all currently publicly accessible). The large area involved should provide the opportunity to support the delivery of green and open spaces and facilities that are suited to various sports and recreational activities. Whilst amenity value from the area would be lost and the open nature of the countryside would be affected, the potential for enhancement through new development is high. Therefore, a **positive effect** is predicted overall.
12. To conserve and enhance the historic environment, heritage assets and their settings.	There are four listed buildings within the boundary of this broad location; the Grade I listed Church of St. Peter and the Grade II listed; Castle Hills Farmhouse, Grange Farmhouse, the Elmdon War Memorial. The Grade I listed Church of St Nicholas lies just outside the boundary at the north western tip. The Church of St. Peter is located in a rural landscape to the north east of the site at Church Lane, surrounded narrow lanes, hedgerows and trees and small fields. Development here has the potential to adversely affect the setting of the Grade I listed building and its setting. Similarly, insensitively designed development in the vicinity of the remaining listed buildings here has the potential to adversely affect these heritage assets and their settings. On the other hand, the large size of this site should allow for the inclusion of appropriate buffers and landscape screening between new development and the heritage assets. Therefore, this site is predicted to have a **neutral effect**.
13. To deliver improvements in townscape and enhance local distinctiveness.	The area is on the urban fringes and largely rural in nature. Therefore, the distinctiveness of existing settlements is unlikely to be significantly affected. New communities with identity could be created, but this is largely dependent on how development in this broad location is laid out and designed. Therefore, **unknown effects** are predicted at this stage.

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
14. Minimise air, soil, water, light and noise pollution: 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 upon those areas identified as First Priority Locations by Defra under the Environmental Noise Directive. e. To conserve the best and most versatile agriculture land. f. Avoid exposure to noise associated with airport and flights.	The scale of housing and employment uses involved in this location are likely to increase road use in the area and is subsequently predicted to increase particulate and nitrogen dioxide levels and road traffic noise generation. Combined with committed and planned growth in this location, it could generate **minor negative effects** with regards to 14a and 14d. A **neutral effect** is predicted for 14b and 14c as this is largely dependent on how development is located and designed. The large scale nature of development should facilitate natural solutions to drainage and allow for mitigation in terms of light intrusion. With respect to 14.e, the broad location is entirely within the green belt and the majority of it is green field. Most of the area is Grade 3 agricultural land. This includes are around 92 hectares of Grade 3a land; classed as best and most versatile agricultural land (BVM) in the western half of the area. There is a parcel of Grade 2 (BVM) land just north Catherine-de-Barnes comprising an area of around 21 ha. These areas represent about 17% of the total area of the site. Therefore, purely in terms of preserving the natural resource of agricultural land and soils; there will potentially be **minor negative effects**. The site is adjacent to the airport and falls within its aircraft track for arrivals. Therefore, the site is directly exposed to noise associated with airport and flights and a **minor negative effect** is predicted for 14 f. Taking the above factors into account, a **minor negative effect** is predicted in terms of pollution. Whether effects are significant is dependent upon design and location. It ought to be possible to implement mitigation and enhancement measures though.
Sustainable Communities 15. Reduce social exclusion and disparities within the Borough: a. Ensure that the pattern of development helps reduce imbalances across the Borough	There is relatively little deprivation evident in the broad location itself (60% least deprived). Therefore, in terms of contributing to regeneration and economic development targeted at specific community groups the site is likely to have a neutral effect in this respect. However, provision of well-designed housing and infrastructure here offers opportunities to create jobs (in construction for example), that could be accessed by communities in Solihull nearby (including north Solihull which is a focus of regeneration). It also provides the opportunity to improve the public realm and introduce community facilities such as new schools. Although deprived communities may not directly benefit from adjacent development, there will be affordable housing delivered which ought to be beneficial

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
b. Promote employment opportunities and improve access to employment, education and health services. c. Improve the public realm and community facilities.	for less affluent groups as well as being located relatively close to jobs and bringing further investment into this area . Overall, **minor positive effects** are predicted.
16. Improve the supply and affordability of housing (particularly in the areas of greatest need): a. Ensure supply of housing appropriate to local needs, especially in relation to affordability. b. Make provision for the accommodation needs of Gypsies and Travellers.	Using GBHMA study assumptions, this broad location would support delivery of a range of housing types and tenures, including the provision of affordable and specialist housing. Provision of the quantum of housing envisaged would make a major contribution to meeting the housing needs within Solihull and would also be relatively well connected to the wider HMA. The proposal would also support the delivery of facilities, services and some employment to support the needs of future residents. Therefore, a **major positive effect** is predicted. It is unclear whether part of the location would be suitable for gypsy and traveller accommodation, but there are qualities that could make it attractive to such communities such as access to strategic road networks.
17. To fully integrate the planning, transport, housing, culture, recreation, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles: a. Design the urban fabric and services to meet the needs of our communities throughout their lives.	The broad location is currently undeveloped in the main. Therefore, much of it is not within close proximity to facilities such as healthcare. There are existing leisure and play facilities accessible from parts of the broad location, but efforts would need to be taken to improve facilities if a new community was created. Development of the scale involved and in this location should be able to deliver a range of services and facilities including retail, leisure, schools and open space. The delivery of onsite medical facilities is largely dependent on the quantum of development with offsite contributions likely at the lower end of the quantum range and medical practice at the higher end. The scale of the location is such that it could deliver a range of services and medical facilities towards the higher end of the quantum range if very large amounts of growth were involved (>3500 dwellings for example). Overall, this broad location should present the opportunity to have **minor positive effects** in terms of health outcomes. The area would be close to Birmingham International Airport. This may provide a number of negative health impacts (such as noise and vibration, and air quality)

Site South of the A45	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	which would require further investigation. These are **minor negative effects**. Although there are positive outcomes, there may well be negative outcomes although this is uncertain at this time. As such, the effects are mixed.
18. Reduce crime, fear of crime and anti-social behaviour.	Development proposals in this location can be designed to minimise opportunities for antisocial behaviour and crime. As such, a **neutral effect** is predicted.
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 broad location is in the vicinity of Birmingham International train station and Birmingham Airport, both of which, are well served by a network of buses linking them to the rest of Birmingham, Solihull and further afield. New Street also has bicycle parking facilities. The existing public transport infrastructure will be further bolstered by HS2 linking Birmingham to London, with a terminal planned in Solihull. These services are likely to enhance public transport services around them and therefore will encourage more residents and businesses to use more sustainable forms of transport, such as, buses, trains and bicycles. A critical factor will be ensuring that access from the site to these facilities is strong. The broad location is close to an existing critical mass of employment land around Birmingham Airport and the NEC and is strategically well located for the motorway (M42 and M6) and rail network. As such, it is considered to perform well against this SA objective. There should also be potential for development of some complementary employment land as part of any scheme. Ensuring good access to local facilities on site could be secured through a masterplan for the site. This would likely involve recreational space, primary school(s) and a local centre. However, access to health services are more likely to be in existing practices that are not close by. Overall, **Major positive effects** are predicted.

6.3 Site South of Balsall Common

6.3.1 This broad location is approximately 257 hectares of mostly greenfield land in the Meriden Gap, part of the wider West Midlands greenbelt. It lies at the southern boundary of the built-up area of the large village of Balsall Common in Coventry. Its northern boundary is formed by the B4101 and its southernmost tip is formed at the junction between the A4177 and A452. The broad location is just over 7 miles from central Coventry and just over 7 miles from the NEC in Birmingham and Birmingham Airport. The location includes some new housing developments, farms, and some commercial properties and a care home. Balsall Common offers good commuter links, with direct trains to both London Euston, Birmingham New Street station and Coventry from nearby Berkswell station. In addition, the M42, M6 and M40 are all within easy reach.

6.3.2 The Draft Local Plan Supplementary Consultation: Site Assessments dated January 2019 carried out site assessments for several smaller parcels of land within this broad location (this includes Site Ref: 74, 304, 112, 77, 338, 138, 414, 1018, 425, 314, and 425). The Draft Local Plan Supplementary Consultation: Site Assessments identifies most of these sites as Category 1 housing sites. The GBHMA Strategic Growth Study considered 'Site 19' around Balsall Common which is identified as a New Settlement Growth Option (10,000+ dwellings). However, in light of the size of 'Site South of Balsall Common' we have applied the GBHMA study Urban Extension Growth Option to the SA assessment which we consider more appropriate. The GBHMA study confirms that Urban Extensions have the following characteristics.

- Housing of the range of 1,500 to 7,500 dwellings.
- These locations provide opportunities for development of a scale which could support residential development, small-scale employment and associated services and infrastructure.
- They would support delivery of a range of housing types and tenures, including the provision of affordable housing
- Provision of the quantum of housing envisaged in the model would make a major contribution to meeting the housing needs of an LPA within the HMA.
- It is envisaged that they would be taken forward, subject to further analysis, using garden settlement principles.

6.3.3 We have applied the Urban Extension assumptions of the GBHMA study to the assessments of the broad locations below.

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Sustainable consumption & production; 1-To contribute to regeneration and economic development	There is relatively little deprivation evident within the broad location or surrounding areas. The majority of the area is located within 60% least deprived parts of the country and the southern half of the site is relatively remote. Therefore, in terms of contributing to regeneration and economic development targeted at specific

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
initiatives that benefit the Borough's communities; especially those identified as deprived: 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 in 'need') benefit from opportunities brought by HS2 and UK Central.	community groups the site is likely to have a **neutral effect**. Provision of well-designed housing and infrastructure here is likely to help attract and retain well-educated members of the work force, particularly when considering the wider region's housing shortage. Therefore, with respect (1a) the site is predicted to have a positive effect. Whilst the northern parts this broad location are adjacent to the settlement of Balsall Common (a large village with a good range of services) the remaining parts of are fairly remote and rural in nature with little in terms of services and infrastructure. Other than the A452 there are no major highways. Therefore, larger businesses may be reluctant to setup here and existing businesses are less likely to relocate to the more remote parts of the site (should it involve an element of employment land). Growth in this location would therefore have neutral effects in this respect. The A452 and Berkswell train station provide good road and rail access to the proposed HS2 station and UK Central hub. Therefore, it is considered that communities should benefit from opportunities brought by HS2 and UK Central and a **minor positive effect** is predicted in this respect. However, it is unlikely that those most at need would benefit from large scale growth in this location. In terms of regeneration and economic development, there ought to be some minor positive effects. However, this is unlikely to support regeneration or those most in need. As a result, the overall effects are considered to be **neutral**.
Sustainable consumption & production; 2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.	Parts of the broad location that are adjacent to the urban fringes are within walking distance of an existing primary school and there is a secondary school within Balsall Common. Whilst the more isolated parts of the location would not be well connected to existing facilities, it would be expected that provision would be made given the likely scale of growth involved. In this respect, neutral effects are predicted in terms of accessing education. There is relatively little deprivation within or adjacent to the broad location, and therefore communities that are currently experiencing difficult accessing employment and training are unlikely to be affected by growth here. The rural nature of the location might mean that new communities are more likely to rely on cars to access employment.

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	Overall the site is anticipated to have a **neutral effect** on reducing the number of people experiencing difficulties in accessing employment, education and training opportunities.
3. To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.	The northern part of this broad location is adjacent to an existing settlement of Balsall Common is likely to benefit from the existing public service and physical infrastructure. The scale of growth likely to be involved has potential to deliver new infrastructure to serve the wider area. However, large parts of this location are remote and not particularly well served by the major highways. A large development in this location could put pressure on local highways, but this would need to be investigated further. The Site is within the Coventry Travel to Work Area (2011). It is not particularly well related to major employment locations within Solihull in terms of public transport and would potentially increase the need to travel to work. It is unlikely that new residents attracted to a major expansion would secure work in the village. Hence expansion of Balsall Common is expected to operate against the objective of reducing the need to travel. Therefore, overall, a **minor negative effect** is predicted.
4. Minimise the use of natural resources, such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling: 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.	The broad location contains > 50ha of agricultural land Grade 1 – 3b and is within a Minerals Safeguarded Area. The broad location is entirely within the green belt and the majority of it is green field. The area is entirely comprised of Grade 3 agricultural land. Some of this may include Grade 3a agricultural land which is classed as best and most versatile agricultural land (BVM) but in the absence of data (post 1988 survey) it is not possible to quantify this. Furthermore, as the majority of the site is greenfield land; using previously developed sites is not an option here. The loss or gain of ecological value on the site is dependent upon existing value and the approach taken to avoid and mitigate impacts, then to achieve a net gain. It is likely that some negative effects could occur, but the scale and nature of the site ought to offer opportunities for mitigation and enhancement. In terms of water, new development in any location will increase demands for water resources. Provided that

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	development is well-planned and supported by infrastructure, effects are likely to be neutral. Similarly, the picture with regards to waste is also neutral. Materials will be required to support development, and new development will generate waste that needs to be managed. This is the case regardless of location though. Overall, the effects of development in this broad location are likely to be **minor negative effects**. This is mainly due to the loss of greenfield, agricultural land, some of which could be best and most versatile land.
Climate change & energy; 5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation: a. Deliver reductions in greenhouse gas emissions to contribute to the national and local target. b. Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.	This broad location is in close proximity to Berkswell train station which links the area to London , Birmingham New Street and Coventry. However, due to the relative remoteness of the southern half of the site, residents are more likely to rely on cars as a means of travel to work and to services. Overall therefore, this site is predicted to have a **minor negative effect** in terms of greenhouse gas (ghg) emissions. The size of the site is likely to engender substantial development. The scale of this will help make more efficient forms of energy consumption and distribution; such as, District Heating systems, more viable. However, there are no clear opportunities identified in this location. With regards to the design and layout of development, the extent to which low carbon development can be achieved depends on multiple factors, including viability, and the ability to implement enhanced standards. New development is likely to be of a higher standard than existing stock though, so should help to ensure carbon emissions from new developments are minimised. Taking all the above factors into consideration **minor negative effects** are predicted in relation to development in this broad location. On one hand, development per se will lead to increased emissions and energy usage, and in this case vehicular emissions. However, the standard of development is likely to be higher than current stock, so this facilitates a move in the right direction in terms of the built environment.
6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.	This is largely dependent on how development on the site is designed and whether there are links to businesses. There are no specific constraints or features at this broad location that would lead to positive or negative effects in this respect. Therefore, **neutral effects** are predicted.

‘Site South of Balsall Common’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
7. Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses.	The substantial development involved could reduce permeability and increase surface water runoff. Development will involve substantial agricultural land take. Agricultural lands within catchment areas impact the emergence of flood events through their surface run-off waters. If cultivation has been properly adapted, the fields can, to a certain extent, contribute to flood prevention. Agricultural land may also serve directly as flood plains. However, the majority of this location is in Flood Zone 1 with only a narrow strip of Zones 2 and 3 at the southern boundary. It would be expected that SUDs would be in place to manage flooding and drainage, and the scale of the location ought to allow for natural solutions to be incorporated into developments. Therefore, **neutral effects** are predicted with regards to drainage and flooding.
8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting behaviour change.	Development on greenfield land on the fringes of Balsall Common could potentially contribute to a more pronounced urban heat island effect (given that there would be less greenfield land and more built development that emits heat). However, the size of the site makes lower density development possible, and it also allows the inclusion of green landscaping and green infrastructure which can help with respect to adaptation to urban heating by reducing urban heat island effects. There would also remain large areas of greenspace surrounding Balsall Common, which is likely to reduce the likelihood of urban heating (when compared to Solihull town which is on the edge of a large city region). As a result, **neutral effects** are predicted. The effects of high winds; such as the venturi effect experienced in spaces between closely built tall blocks, can be mitigated by considering the prevailing wind directions at planning stage and adapting the design of the development to the most appropriate massing and distribution of buildings. Development parcels in this location should allow more flexibility in adapting the density, distribution and massing of built form to minimise effects associated with high winds in the development.

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Natural resource protection & environmental enhancement 9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	There are no European or internationally designated sites within the broad location itself or in its vicinity. There are four Local Wildlife Sites within the location; Fen End Pastures, Fen End Meadow, Fernhill Lane Hedge and Blackholes Farm Meadow. These form a total area of around 3.5 ha. representing around 1.4% of the whole area. There are three small pockets of priority habitat in the form of deciduous woodland, with a total area of 1 ha. In terms priority species, part of the area are home to the Lapwing (priority species for country stewardship targeting) and also Grey Partridge. Whilst development will inevitably create some fragmentation and disturbance to habitats and species, in the absence of designated European / international sites, or SSSIs it should be possible to avoid effects on the more sensitive locations. Large scale development has the potential to have minor negative effects on the wildlife habitats discussed above. This could be through direct loss of habitat, disturbance and fragmentation. However, the very large area should offer opportunities to enhance areas of lower ecological value, avoid sensitive areas and secure mitigation. As a result, whilst negative effects are possible, they should be possible to avoid. There may also be good opportunities to secure enhancement and strengthen links to habitats within and surrounding the site, which is **potentially a moderate positive effect** in the longer term (there is an assumption that net gain would be secured in this location).
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 site falls within LCA5 and includes a number of landscape features including gently undulating landform and natural ponds. The landscape effects are largely dependent on how development on the site is designed. However, the site is considered in the LCA to have medium sensitivity to change and will form a large extension to the existing settlement. A **minor negative effect** is therefore predicted, with the potential for significant effects depending upon the nature and scale of growth.
11. To facilitate the delivery and enhance the quality of areas providing green infrastructure.	The large area involved should provide the opportunity to support the delivery of green and open spaces and facilities that are suited to various sports and recreational activities. Whilst amenity value from the area would be lost and the open nature of the countryside would be affected, the potential for enhancement through new

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	development is high. Therefore, a **minor positive effect** is predicted overall.
12. To conserve and enhance the historic environment, heritage assets and their settings.	There are several listed buildings within the broad location mostly along its boundary, including the Grade II* Berkswell Windmill and a further eight Grade II listed buildings; comprising cottages, farmhouses, barn and stables. There are no Grade I listed buildings and no scheduled monuments. The listed assets are characterised by surrounding landscape features fields, mature trees, hedgerows and narrow country lanes. Large scale development is likely to result in negative effects on the setting of these assets. Whilst there could be inclusion of appropriate buffers and landscape screening between new development and the heritage assets, it is likely that the rural nature (which contributes to the setting of listed buildings) will be eroded. Consequently a **minor negative effect** is predicted.
13. To deliver improvements in townscape and enhance local distinctiveness.	New communities with identity could be created, but this is largely dependent on how development in this broad location is laid out and designed. Conversely, a large scale extension to Balsall Common could have adverse effects on the local character, distinctiveness and community identity of existing areas. This is a potential **minor negative effect**.
14. Minimise air, soil, water, light and noise pollution: 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 upon those areas identified as First Priority Locations by Defra under the	The scale of housing and employment uses involved in this location are likely to increase road use in the area and is subsequently predicted to increase particulate and nitrogen dioxide levels and road traffic noise generation. The effects in the immediate area are unlikely to be significantly negative with regards to air quality, as background levels in this area are not problematic. However, development could lead to increased movement by car between Balsall and Solihull, the UK Central hub, Birmingham and Coventry. This could result in poorer air quality in these more distant locations, which is a **minor negative effect**. A **neutral effect** is predicted for 14b and 14c as this is largely dependent on how development is located and designed. The large scale nature of development should facilitate natural solutions to drainage and allow for mitigation in terms of light intrusion. Sources of noise adjacent to site that could affect amenity include A/B road, a dog training centre and agricultural processes (though these could be replaced by changes in

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Environmental Noise Directive. e. To conserve the best and most versatile agriculture land. f. Avoid exposure to noise associated with airport and flights.	land use). It ought to be possible to mitigate negative effects and so a **neutral effect** is predicted for 14d. With respect to 14.e, the broad location mostly comprises Grade 3 agricultural land. Some of this may include Grade 3a land; classed as best and most versatile agricultural land (BVM) but in the absence of data (post 1988 survey) it is not possible to quantify this. Therefore, purely in terms of preserving the natural resource of agricultural land and soils; there will potentially be **minor negative effects.** Taking the above factors into account, a **minor negative effect** is predicted in terms of pollution overall. Whether effects are significant is dependent upon design and location, but it ought to be possible to implement mitigation and enhancement measures.
Sustainable Communities 15. Reduce social exclusion and disparities within the Borough: 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.	There is relatively little deprivation within this broad location or surrounding areas. Therefore, development is unlikely to address imbalances in social inclusion and deprivation across the borough. Therefore, neutral effects are predicted in this respect. The additional housing and some employment development here could have positive effects with regards to provision of employment, but this is not in locations where communities are in greatest need, and is not readily accessible. The scale of housing and small scale employment development is likely to involve community infrastructure such as education facilities and recreation areas. Funds through the Community Infrastructure Levy (CIL) and planning obligations (or equivalent following planning reforms) would help fund investment in infrastructure and the public realm. However, the benefits are unlikely to be felt in communities that experience social exclusion. As a consequence, **neutral effects** are predicted overall.
16. Improve the supply and affordability of housing (particularly in the areas of greatest need): a. Ensure supply of housing appropriate to local needs, especially	The broad location would support delivery of a range of housing types and tenures, including the provision of affordable housing. Provision of the quantum of housing envisaged would make a major contribution to meeting the housing needs within Solihull. The proposal would also support the delivery of facilities, services and potentially some employment to support the needs of future residents. This location has some connection to Birmingham and Solihull Town through public transport

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
in relation to affordability. b. Make provision for the accommodation needs of Gypsies and Travellers.	links. However, housing here might not be in the areas of greatest need or those with the best connection to Birmingham. As such, **moderate positive effects** are predicted. It is unclear whether specific accommodation for Gypsies and Travellers would be suitable and attractive in this location.
17. To fully integrate the planning, transport, housing, culture, recreation, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles: a. Design the urban fabric and services to meet the needs of our communities throughout their lives.	Development at this broad location would likely rely on access to a GP/health centre in Balsall Common, which is more than 2.5 km from the majority of the area. There are existing leisure and play facilities accessible from parts of the broad location, but efforts would need to be taken to improve facilities if a new community was created. Development of the scale involved and in this location should be able to deliver a range of services and facilities including retail, leisure, schools and open space. The delivery of onsite medical facilities is largely dependent on the quantum of development with offsite contributions likely at the lower end of the quantum range and medical practice at the higher end. The scale of the location is such that it could deliver a range of services and medical facilities towards the higher end of the quantum range if very large amounts of growth were involved (>3500 dwellings for example). Overall, this broad location should present the opportunity to have **minor positive effects** in terms of health outcomes. There are question marks over the accessibility of the site to healthcare and services via walking and cycling though.
18. Reduce crime, fear of crime and anti-social behaviour.	Development proposals can be designed to minimise opportunities for antisocial behaviour and crime. Therefore, a **neutral effect** is predicted.
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 broad location is physically distant from key employment assets within Solihull and Birmingham. However, the site benefits from good road connectivity via the A452 to key employers including NEC and Birmingham Airport, the B4101 to employment opportunities in Coventry and the proposed UK Central Hub. The urban fringe is within close proximity to bus stops with services to Solihull town centre and Coventry city centre. However, services would need to be secured through this location to ensure good accessibility. There are existing facilities in Balsall Common, and it is likely that development would also allow for the

'Site South of Balsall Common'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	introduction of new facilities, recreation and amenities. Overall, a **minor positive effect** is predicted.

6.4 Balsall Common North

6.4.1 This broad location is approximately 270 Hectares of Green Belt land extending north west from the northern built up edge of Balsall Common. Needlers End Lane and Dengate Drive form the southern boundary of the site. The Eastern edge runs parallel to the A452 and the Birmingham-London railway line up to the northern most point where Bradnocks Marsh Lane meets Marsh House Lane. To the West the boundary runs from Bradnocks Marsh Lane and Barston Lane down to the B4102 (Balsall Street) where it meets Needlers End Lane. The villages of Berkswell is 1.4 miles to the east and Barston is 1.25 miles to the west. Birmingham International Airport and NEC are just over 6 miles away, to the North. Coventry is about 7 miles to the east.

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Sustainable consumption & production; 1-To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived: 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	There is relatively little deprivation evident within the broad location or surrounding areas. The majority of the area is located within 60% least deprived parts of the country and the northern and western parts of the broad location are relatively remote. Therefore, in terms of contributing to regeneration and economic development targeted at specific community groups the site is likely to have a **neutral effect.** Provision of well-designed housing and infrastructure here is likely to help attract and retain well-educated members of the work force, particularly when considering the wider region's housing shortage. Therefore, in this respect **minor positive effects** are predicted. Whilst the southern parts this broad location are adjacent to the settlement of Balsall Common (a large village with a good range of services) the remaining parts of are fairly remote and rural in nature with little in terms of services and infrastructure. Other than the A452 there are no major highways or nearby 'economic hubs'. Therefore, the location may be less attractive from a business perspective compared to growth near the UK Central Hub. As a result, **neutral effects** are predicted in this respect. The A452 and Berkswell train station provide good road and rail access to the proposed HS2 station and UK

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
knowledge-hub that exists. c. Ensure that communities (especially those in 'need') benefit from opportunities brought by HS2 and UK Central.	Central hub. Therefore, it is considered that communities should benefit from opportunities brought by HS2 and UK Central and a **minor positive effect** is predicted in this respect. However, it is unlikely that those most at need would benefit from large scale growth in this location. In terms of regeneration and economic development, there ought to be some **minor positive effects**. However, this is unlikely to support regeneration or those most in need. As a result, the overall effects are considered to be **minor positive effects.**
Sustainable consumption & production; 2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.	Parts of the broad location that are adjacent to the urban fringes are just within walking distance of an existing secondary school within Balsall Common. Whilst the more isolated parts of the location would not be well connected to existing facilities, it would be expected that provision would be made given the likely scale of growth involved. In this respect, neutral effects are predicted in terms of accessing education. There is relatively little deprivation within or adjacent to the broad location, and therefore communities that are currently experiencing difficult accessing employment and training are unlikely to be affected by growth here. The rural nature of the location might mean that new communities are more likely to rely on cars to access employment. Overall the site is anticipated to have a **neutral effect** on reducing the number of people experiencing difficulties in accessing employment, education and training opportunities. To ensure access to a primary school is good across the broad location, siting would be important (given that the nearest existing primary schools are not within walking distance to any parts of the broad location.
3. To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.	The southern part of the site, being adjacent to the existing settlement of Balsall Common, is likely to benefit from the existing services and physical infrastructure there. The scale of growth likely to be involved also has potential to deliver new infrastructure to serve the wider area. However, large parts of this location are remote and not particularly well served by the major highways. A large development in this location could put pressure on local highways, but this would need to be investigated further. The Site is within the Coventry Travel to Work Area (2011). It is not particularly well related to major employment locations within Solihull in terms of public

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	transport and would potentially increase the need to travel to work. It is unlikely that new residents attracted to a major expansion would secure work in the village. Hence expansion of Balsall Common is expected to operate against the objective of reducing the need to travel. Therefore, overall, a **minor negative effect** is predicted.
4. Minimise the use of natural resources, such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling: 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.	The broad location contains > 50ha of agricultural land Grade 1 – 3b, but is not within a Minerals Safeguarded Area. The broad location is entirely within the green belt and the majority of it is greenfield. The area is entirely comprised of Grade 3 agricultural land. Some of this may include Grade 3a agricultural land which is classed as best and most versatile agricultural land (BVM) but in the absence of data (post 1988 survey) it is not possible to quantify this. Furthermore, as the majority of the site is greenfield land; using previously developed sites is not an option here. Therefore, minor negative effects are likely to arise. The loss or gain of ecological value on the site is dependent upon existing value and the approach taken to avoid and mitigate impacts, then to achieve a net gain. It is likely that some negative effects could occur, but the scale and nature of the site ought to offer opportunities for mitigation and enhancement. In terms of water, new development in any location will increase demands for water resources. Provided that development is well-planned and supported by infrastructure, effects are likely to be neutral. Similarly, the picture with regards to waste is also neutral. Materials will be required to support development, and new development will generate waste that needs to be managed. This is the case regardless of location though. Overall, the effects of development in this broad location are likely to be **minor negative effects**. This is mainly due to the loss of greenfield, agricultural land, some of which could be best and most versatile land.

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Climate change & energy; 5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation: a. Deliver reductions in greenhouse gas emissions to contribute to the national and local target. b. Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.	This site is in close proximity to Berkswell train station which links the area to London, Birmingham New Street and Coventry. However, due to the relative remoteness of the southern half of the site, residents are more likely to rely on cars as a means of travel to work and to services. Overall therefore, this site is predicted to have a **negative** effect in terms of minimising greenhouse gas (ghg) emissions and helping deliver a reduction in ghg emissions. The size of the site is likely to engender substantial development. The scale of this will help make more efficient forms of energy consumption and distribution; such as, District Heating systems, more viable. However, there are no clear opportunities identified in this location. With regards to the design and layout of development, the extent to which low carbon development can be achieved depends on multiple factors, including viability, and the ability to implement enhanced standards. New development is likely to be of a higher standard than existing stock though, so should help to ensure carbon emissions from new developments are minimised. Taking all the above factors into consideration **minor negative effects** are predicted in relation to development in this broad location. On one hand, development per se will lead to increased emissions and energy usage, and in this case vehicular emissions. However, the standard of development is likely to be higher than current stock, so this facilitates a move in the right direction in terms of the built environment.
6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.	This is largely dependent on how development on the site is designed and whether there are links to businesses. There are no specific constraints or features at this broad location that would lead to positive or negative effects in this respect. Therefore, **neutral effects** are predicted.
7. Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses.	The substantial development involved could reduce permeability and increase surface water runoff. Development will involve substantial agricultural land take. Agricultural lands within catchment areas impact the emergence of flood events through their surface run-off waters. If cultivation has been properly adapted, the fields can, to a certain extent, contribute to flood prevention. Agricultural land may also serve directly as flood plains. Up to 50% of the broad location is within Flood Zone 2 and 3. It would be expected that SUDs would be in place

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	to manage flooding and drainage, and the scale of the location ought to allow for natural solutions to be incorporated into developments. However, the potential to avoid areas of flood risk could be more difficult given the large amount of FZ2 and 3. For this reason, **minor negative effects** are predicted with regards to climate change adaptation.
8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting behaviour change.	Development on greenfield land on the fringes of Balsall Common could potentially contribute to a more pronounced urban heat island effect (given that there would be less greenfield land and more built development that emits heat). However, the size of the site makes lower density development possible, and it also allows the inclusion of green landscaping and green infrastructure which can help with respect to adaptation to urban heating by reducing urban heat island effects. There would also remain large areas of greenspace surrounding Balsall Common, which is likely to reduce the likelihood of urban heating (when compared to Solihull town which is on the edge of a large city region). As a result, **neutral effects** are predicted. The effects of high winds; such as the venturi effect experienced in spaces between closely built tall blocks, can be mitigated by considering the prevailing wind directions at planning stage and adapting the design of the development to the most appropriate massing and distribution of buildings. Development parcels in this location should allow more flexibility in adapting the density, distribution and massing of built form to minimise effects associated with high winds in the development.
Natural resource protection & environmental enhancement 9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	There are four local wildlife sites within the broad location; Brooklands Spinneys, Wood at Wootton Green, Needlers End Spinney and Needlers End Meadow. They occupy a total of around 10 ha, with the largest site being Brooklands Spinneys (5.7 ha). These areas represent less than 4% of the broad location. Whilst there are no European or internationally designated sites within the location, the River Blythe SSSI runs adjacent to the north western boundary of the site and its impact risk zones extend into the site. The Blythe has a wide range of structural features (pools, cliffs, meanders) with a diversity of substrates (silt, clay, sands and gravels) which is considered rare in lowland Britain. It is also noted for being one of the richest rivers in lowland England supporting a diverse range of flora and fauna[22]. The

[22] Source; Natural England; https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1001772

‘Balsall Common North’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	Blythe SSSI is currently in an 'unfavourable no change' condition, due to physical habitat modification, such as, weirs and dams and invasive species. The current unfavourable physical habitat condition is as a result of previous historic management. The physical modifications prevent the river from functioning naturally, restricting its ecological health and lowering the overall SSSI condition. The tributary nearest to the site is the Temple Balsall Brook to Patrick Bridge water course which is classified as ‘Good’ overall; ‘Moderate’ ecologically and ‘Good’ Chemically. Development would generate wastewater in the form of surface water runoff and treated wastewater effluent which could potentially harm the water quality in the Blythe and adversely impact the SSSI. However, the potential loss of agricultural activities that would result from development can potentially reduce nutrient pollution due to agricultural runoff which produce phosphates and nitrates. Mitigation in the form of appropriately designed drainage, SUDS and effective wastewater treatment could mitigate the effects though. There are two small pockets of Traditional Orchard priority habitat and several small parcels of Deciduous Woodland priority habitat. In terms of species the top half of the area contains a priority species countryside stewardship target area for the Lapwing. There are several species of birds in the area including; Red Shank, Tree Sparrow and Yellow Wagtail. Large scale development has the potential to have negative effects on the wildlife habitats within the broad location discussed above. This could be through direct loss of habitat, disturbance and fragmentation. Development might also contribute towards pressures on the SSSI. The very large area of development involved should offer opportunities to enhance areas of lower ecological value, avoid sensitive areas and secure mitigation (including in terms of pressures on the SSSI). As a result, whilst minor to **moderate negative effects** are possible, they should be possible to avoid and minimise. There may also be good opportunities to secure enhancement and strengthen links to habitats within and surrounding the site, which is potentially a **moderate positive effect** in the longer term (there is an assumption that net gain would be secured in this location).

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
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 broad location falls within LCA4 Sub Area 4C and includes a number of landscape features such as medium sized fields bounded by hedgerows of various condition, mature trees within fields and narrow winding roads. The landscape effects are largely dependent on the scale of growth and how development is laid out and designed. However, the site is considered in the LCA to have high sensitivity to change. Therefore, a **significant negative effect** is predicted.
11. To facilitate the delivery and enhance the quality of areas providing green infrastructure.	The broad location is well related to existing greenspace / countryside land (though this is not all currently publicly accessible). The large areas involved should provide the opportunity to support the delivery of green and open spaces and facilities that are suited to various sports and recreational activities. Whilst amenity value from the area would be lost and the open nature of the countryside would be affected, the potential for enhancement (of green infrastructure) through new development is high. Therefore, a **minor positive effect** is predicted overall.
12. To conserve and enhance the historic environment, heritage assets and their settings.	There are several Grade II listed Cottages within the site (mostly to the boundaries), and there are further listed buildings to the south of the boundary in particular. Insensitively designed development in the vicinity of these buildings could adversely affect these heritage assets and their settings. However, the large size of the area should allow for the including of appropriate buffers and landscape screening between new development and heritage assets. Despite mitigation being secured, a substantial development is still likely to alter the rural character of these areas. Therefore, **minor negative effects** are predicted.
13. To deliver improvements in townscape and enhance local distinctiveness.	New communities with identity could be created, but this is largely dependent on how development in this broad location is laid out and designed. Conversely, a large scale extension to Balsall Common could have adverse effects on the local character, distinctiveness and community identity of existing areas. This is a potential **minor negative effect**.

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
14. Minimise air, soil, water, light and noise pollution: 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 upon those areas identified as First Priority Locations by Defra under the Environmental Noise Directive. e. To conserve the best and most versatile agriculture land. f. Avoid exposure to noise associated with airport and flights.	The scale of housing and employment uses involved in this location are likely to increase road use in the area and is subsequently predicted to increase particulate and nitrogen dioxide levels and road traffic noise generation. The effects in the immediate area are unlikely to be significantly negative with regards to air quality, as background levels in this area are not problematic. Although the site is in proximity to Berkswell train station, development is likely to lead to increased movement by car between Balsall and Solihull, the UK Central hub, Birmingham and Coventry. This could result in poorer air quality in these more distant locations, which is a **minor negative effect.** Increase in private car use would also result in increased road traffic noise locally, resulting in a negative effect for 14d. A **neutral effect** is predicted for 14b and 14c as this is largely dependent on how development is located and designed. The large scale nature of development should facilitate natural solutions to drainage and allow for mitigation in terms of light intrusion. Sources of noise adjacent to site that could affect amenity include A/B road, sewage treatment works, agricultural processes (though these could be replaced by changes in land use). It ought to be possible to mitigate negative effects and so a **neutral effect** is predicted for 14d With respect to 14e, the broad location mostly comprises Grade 3 agricultural land. Some of the Grade 3 land may include Grade 3a agricultural land which is classed as best and most versatile agricultural land (BVM). However, in the absence of data (post 1988 survey) it is not possible to quantify this. Therefore, purely in terms of preserving the natural resource of agricultural land and soils; the site will potentially have a **minor negative effect.** Taking the above factors into account, a **minor negative effect** is predicted in terms of pollution overall. Whether effects are significant is dependent upon design and location, but it ought to be possible to implement mitigation and enhancement measures.

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Sustainable Communities 15. Reduce social exclusion and disparities within the Borough: 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.	There is relatively little deprivation within this broad location or surrounding areas. Therefore, development is unlikely to address imbalances in social inclusion and deprivation across the borough. Therefore, neutral effects are predicted in this respect. The additional housing and some employment development here could have positive effects with regards to provision of employment, but this is not in locations where communities are in greatest need, and is not readily accessible. The scale of housing and small scale employment development is likely to involve community infrastructure such as education facilities and recreation areas. Funds through the Community Infrastructure Levy (CIL) and planning obligations (or equivalent following planning reforms) would help fund investment in infrastructure and the public realm. However, the benefits are unlikely to be felt in communities that experience social exclusion. As a consequence, **neutral effects** are predicted overall.
16. Improve the supply and affordability of housing (particularly in the areas of greatest need): a. Ensure supply of housing appropriate to local needs, especially in relation to affordability. b. Make provision for the accommodation needs of Gypsies and Travellers.	The broad location would support delivery of a range of housing types and tenures, including the provision of affordable housing. Provision of the quantum of housing envisaged would make a major contribution to meeting the housing needs within Solihull. The proposal would also support the delivery of facilities, services and potentially some employment to support the needs of future residents. This location has some connection to Birmingham and Solihull Town through public transport links. However, housing here might not be in the areas of greatest need or those with the best connection to Birmingham. As such, **moderate positive effects** are predicted. It is unclear whether specific accommodation for Gypsies and Travellers would be suitable and attractive in this location.

'Balsall Common North'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
17. To fully integrate the planning, transport, housing, culture, recreation, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles: a. Design the urban fabric and services to meet the needs of our communities throughout their lives.	Development at this broad location would likely rely on access to a GP/health centre in Balsall Common, which is just within 1200m from the boundary of the broad location (which is accessible to some groups by foot/cycling). However, the majority of the area is not within walking distance. There are existing leisure and play facilities accessible from parts of the broad location, but efforts would need to be taken to improve facilities if a new community was created. Development of the scale involved and in this location should be able to deliver a range of services and facilities including retail, leisure, schools and open space. The delivery of onsite medical facilities is largely dependent on the quantum of development with offsite contributions likely at the lower end of the quantum range and medical practice at the higher end. The scale of the location is such that it could deliver a range of services and medical facilities towards the higher end of the quantum range if very large amounts of growth were involved (>3500 dwellings for example). Overall, this broad location should present the opportunity to have **minor positive effects** in terms of health outcomes. There are question marks over the accessibility of the site to healthcare and services via walking and cycling though.
18. Reduce crime, fear of crime and anti-social behaviour.	Development proposals can be designed to minimise opportunities for antisocial behaviour and crime. Therefore, a **neutral effect** is predicted.
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 broad location is physically distant from key employment assets within Solihull and Birmingham. However, the site benefits from good road connectivity via the A452 to key employers including NEC and Birmingham Airport, the B4101 to employment opportunities in Coventry and the proposed UK Central Hub. The urban fringe is within close proximity to bus stops with services to Solihull town centre and Coventry city centre. However, services would need to be secured through this location to ensure good accessibility. There are existing facilities in Balsall Common, and it is likely that development would also allow for the introduction of new facilities, recreation and amenities. Overall, a **minor positive effect** is predicted.

6.5 Balsall Common East

6.5.1 This broad location comprises approximately 285 Hectares of Green Belt land north east of Balsall Common, around 1 km from the western limit of the built edge of the Coventry. The centre of the area lies approximately 5 miles from central Coventry and 5 miles from Birmingham International Airport and the NEC to the North East. Berkswell train station is around 200 meters from the western edge of the broad location. The route of HS2 will traverse the southern part of this location; crossing Truggist Lane onto a viaduct taking it adjacent to the Lavender Hall Fishery site[23].

'Balsall Common East'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Sustainable consumption & production; 1-To contribute to regeneration and economic development initiatives that benefit the Borough's communities; especially those identified as deprived: 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 in 'need') benefit from opportunities brought by HS2 and UK Central.	There is relatively little deprivation evident within the broad location or surrounding areas. The majority of the area is located within 60% least deprived parts of the country and the northern and western parts of the broad location are relatively remote. Therefore, in terms of contributing to regeneration and economic development targeted at specific community groups the site is likely to have a **neutral effect.** Provision of well-designed housing and infrastructure here is likely to help attract and retain well-educated members of the work force, particularly when considering the wider region's housing shortage. Therefore, in this respect **minor positive effects** are predicted. Whilst the southern parts this broad location are adjacent to the settlement of Balsall Common (a large village with a good range of services) the remaining parts of are fairly remote and rural in nature with little in terms of services and infrastructure. Other than the A452 there are no major highways or nearby 'economic hubs'. Therefore, the location may be less attractive from a business perspective compared to growth near the UK Central Hub. As a result, **neutral effects** are predicted in this respect. The A452 and Berkswell train station provide good road and rail access to the proposed HS2 station and UK Central hub. Therefore, it is considered that communities should benefit from opportunities brought by HS2 and UK Central and a **minor positive effect** is predicted in this respect. However, it is unlikely that those most at need would benefit from large scale growth in this location. In terms of regeneration and economic development, there ought to be some **minor positive effects**. However, this is unlikely to support regeneration or those most in

[23] HS2 Planning Context Report prepared for Solihull Metropolitan Borough Council (April 2017) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/642659/hs2_planning_context_report_for_solihull.pdf

‘Balsall Common East’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	need. As a result, the overall effects are considered to be **minor positive effects.**
Sustainable consumption & production; 2. To reduce the number of people experiencing difficulties in accessing employment, education and training opportunities.	Parts of the broad location that are adjacent to the urban fringes are within walking distance of an existing primary school and there is a secondary school within Balsall Common. Whilst the more isolated parts of the location would not be well connected to existing facilities, it would be expected that provision would be made given the likely scale of growth involved. In this respect, neutral effects are predicted in terms of accessing education. There is relatively little deprivation within or adjacent to the broad location, and therefore communities that are currently experiencing difficult accessing employment and training are unlikely to be affected by growth here. The rural nature of the location might mean that new communities are more likely to rely on cars to access employment. Overall the site is anticipated to have a **neutral effect** on reducing the number of people experiencing difficulties in accessing employment, education and training opportunities.
3. To ensure that the location of development can be accommodated by existing and/or planned infrastructure and reduces the need to travel.	The southern boundaries of this broad location are likely to benefit from reasonable access to public transport and services offered in Balsall Common. However, much of the site is remote and would rely on new infrastructure. The scale of growth likely to be involved has potential to deliver new infrastructure to serve the wider area. However, large parts of this location are remote and not particularly well served by the major highways. A large development in this location could put pressure on local highways, but this would need to be investigated further. The Site is within the Coventry Travel to Work Area (2011). It is not particularly well related to major employment locations within Solihull in terms of public transport and would potentially increase the need to travel to work. It is unlikely that new residents attracted to a major expansion would secure work in the village. Hence expansion of Balsall Common is expected to operate against the objective of reducing the need to travel. The site consists of a series of lanes which connect the area to Balsall Common. The existing railway line and proposed HS2 route act as local physical constraints.

‘Balsall Common East’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	Therefore, overall, a **moderate negative effect** is predicted.
4. Minimise the use of natural resources, such as land, water and minerals, and minimise waste, whilst increasing reuse and recycling: 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.	The broad location contains more than 20ha of Grade 1-2 of agricultural land. The remainder of the area consists of grade 3 land, and some further potential grade 2 land. Much of the broad location is also within a mineral safeguarding area. There is over 100 Hectares of agriculture land affected, a large proportion of which could be best and most versatile land. However, in the absence of data (post 1988 survey) it is not possible to accurately quantify this. Nevertheless, in terms of preserving the natural resource of agricultural land and soils; negative effects are predicted. The broad location is entirely within the green belt and the majority of it is green field. As the majority of the site is greenfield land; using substantial areas of previously developed sites is not an option here. The loss or gain of ecological value on the site is dependent upon existing value and the approach taken to avoid and mitigate impacts, then to achieve a net gain. It is likely that some negative effects could occur, but the scale and nature of the site ought to offer opportunities for mitigation and enhancement. In terms of water, new development in any location will increase demands for water resources. Provided that development is well-planned and supported by infrastructure, effects are likely to be neutral. Similarly, the picture with regards to waste is also neutral. Materials will be required to support development, and new development will generate waste that needs to be managed. This is the case regardless of location though. Overall, the effects of development in this broad location are likely to be **moderate negative effects**. This is mainly due to the loss of greenfield, agricultural land, some of which is known to be best and most versatile land. The area also contains mineral resources.

'Balsall Common East'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
Climate change & energy; 5. Minimise greenhouse gas emissions, reduce energy use, encourage energy efficiency and renewable energy generation: a. Deliver reductions in greenhouse gas emissions to contribute to the national and local target. b. Encourage reduced energy use, use of low carbon distributive energy systems and renewable energy.	This site is in relatively close proximity to Berkswell train station which links the area to London, Birmingham New Street and Coventry. However, due to the relative remoteness of the southern half of the site, residents are more likely to rely on cars as a means of travel to work and to services. Therefore, this site is predicted to have a **minor negative effect** in terms of minimising greenhouse gas (ghg) emissions from transport and travel. The size of the site is likely to engender substantial development. The scale of this will help make more efficient forms of energy consumption and distribution; such as, District Heating systems, more viable. However, there are no clear opportunities identified in this location. With regards to the design and layout of development, the extent to which low carbon development can be achieved depends on multiple factors, including viability, and the ability to implement enhanced standards. New development is likely to be of a higher standard than existing stock though, so should help to ensure carbon emissions from new developments are minimised. Taking all the above factors into consideration **minor negative effects** are predicted in relation to development in this broad location. On one hand, development per se will lead to increased emissions and energy usage, and in this case vehicular emissions. However, the standard of development is likely to be higher than current stock, so this facilitates a move in the right direction in terms of the built environment.
6. To assist businesses in the adaptation they need to become more resource efficient and resilient to the effects of a changing climate.	This is largely dependent on how development on the site is designed and whether there are links to businesses. There are no specific constraints or features at this broad location that would lead to positive or negative effects in this respect. Therefore, **neutral effects** are predicted.
7. Manage, maintain and where necessary improve the drainage network to reduce the negative effects of flooding on communities and businesses.	The substantial development involved could reduce permeability and increase surface water runoff. Development will involve substantial agricultural land take. Agricultural lands within catchment areas impact the emergence of flood events through their surface run-off waters. If cultivation has been properly adapted, the fields can, to a certain extent, contribute to flood prevention. Agricultural land may also serve directly as flood plains. Up to 50% of the broad location is within Flood Zone 2 and 3. It would be expected that SUDs would be in place to manage flooding and drainage, and the scale of the

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SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	location ought to allow for natural solutions to be incorporated into developments. However, the potential to avoid areas of flood risk could be more difficult given the large amount of FZ2 and 3. For this reason, **minor negative effects** are predicted with regards to climate change adaptation.
8. To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting behaviour change.	Development on greenfield land on the fringes of Balsall Common could potentially contribute to a more pronounced urban heat island effect (given that there would be less greenfield land and more built development that emits heat). However, the size of the site makes lower density development possible, and it also allows the inclusion of green landscaping and green infrastructure which can help with respect to adaptation to urban heating by reducing urban heat island effects. There would also remain large areas of greenspace surrounding Balsall Common, which is likely to reduce the likelihood of urban heating (when compared to Solihull town which is on the edge of a large city region). As a result, **neutral effects** are predicted. The effects of high winds; such as the venturi effect experienced in spaces between closely built tall blocks, can be mitigated by considering the prevailing wind directions at planning stage and adapting the design of the development to the most appropriate massing and distribution of buildings. Development parcels in this location should allow more flexibility in adapting the density, distribution and massing of built form to minimise effects associated with high winds in the development.
Natural resource protection & environmental enhancement 9. Protect the integrity and connectivity of ecological sites and ensure that enhancement for habitats and species are not prejudiced.	There are small pockets of Deciduous Woodland (priority habitat inventory), totalling around 4.7 Ha. Several species of birds are found here including the Lapwing (priority species for countryside stewardship targeting), the Grey Partridge, Red Shank, Tree Sparrow and Yellow Wagtail. There are no SSSI, European or International designations within the site. There is one local wildlife site; Wood at Benton Green (2.6 ha). Whilst development will inevitably create some fragmentation and disturbance to habitats and species, in the absence of designated European / international sites, or SSSIs it should be possible to avoid effects on the more sensitive locations. Large scale development has the potential to have minor negative effects on the wildlife habitats discussed above.

'Balsall Common East'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	This could be through direct loss of habitat, disturbance and fragmentation. However, the very large area should offer opportunities to enhance areas of lower ecological value, avoid sensitive areas and secure mitigation. As a result, whilst **minor negative effects** are possible, they should be possible to avoid. There may also be good opportunities to secure enhancement and strengthen links to habitats within and surrounding the site, which is potentially a **moderate positive effect** in the longer term (there is an assumption that net gain would be secured in this location).
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 site falls within LCA4 Sub Area 4C and LCA5. The site includes a number of landscape features including small to medium sized fields bounded by hedgerows and narrow winding roads. The landscape effects are largely dependent on the scale of growth and how development is laid out and designed. However, the site is considered in the LCA to have high sensitivity to change. Therefore, a **significant negative effect** is predicted.
11. To facilitate the delivery and enhance the quality of areas providing green infrastructure.	The broad location is well related to existing greenspace / the countryside (though this is not all currently publicly accessible). The large area involved should provide the opportunity to support the delivery of green and open spaces and facilities that are suited to various sports and recreational activities. Whilst amenity value from the area would be lost and the open nature of the countryside would be affected, the potential for enhancement (of green infrastructure) through new development is high. Therefore, a **minor positive effect** is predicted overall.
12. To conserve and enhance the historic environment, heritage assets and their settings.	In terms of heritage assets there are around a dozen Grade II and one Grade II* listed buildings within the site. These include houses and barns. There are a further six Grade II and one Grade II* listed buildings just outside the boundary of the site. The latter include heritage assets associated with the Berkswell Conservation Area just outside the northern boundary of the site Some assets are located on the boundaries (and could be easier to avoid), whilst some are isolated locations within more central areas. An open countryside setting contributes to the setting of these assets, and some buildings might be directly affected by large-scale development. The large size of the broad location should allow for the inclusion of appropriate buffers and landscape screening between new development and the

‘Balsall Common East’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	heritage assets. However, the number of heritage assets likely to be affected and their dispersed nature across the broad location means that minor to **moderate negative effects** could occur.
13. To deliver improvements in townscape and enhance local distinctiveness.	New communities with identity could be created, but this is largely dependent on how development in this broad location is laid out and designed. Conversely, a large scale extension to Balsall Common could have adverse effects on the local character, distinctiveness and community identity of existing areas. This is a potential **minor negative effect**.
14. Minimise air, soil, water, light and noise pollution: 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 upon those areas identified as First Priority Locations by Defra under the Environmental Noise Directive. e. To conserve the best and most versatile agriculture land. f. Avoid exposure to noise associated with airport and flights.	The scale of housing and employment uses involved in this location are likely to increase road use in the area and is subsequently predicted to increase particulate and nitrogen dioxide levels and road traffic noise generation. The effects in the immediate area are unlikely to be significantly negative with regards to air quality, as background levels in this area are not problematic. Although the site is in proximity to Berkswell train station, development is likely to lead to increased movement by car between Balsall and Solihull, the UK Central hub, Birmingham and Coventry. This could result in poorer air quality in these more distant locations, which is a **minor negative effect.** Increase in private car use would also result in increased road traffic noise locally, resulting in a negative effect for 14d. A **neutral effect** is predicted for 14b and 14c as this is largely dependent on how development is located and designed. The large scale nature of development should facilitate natural solutions to drainage and allow for mitigation in terms of light intrusion. Sources of noise adjacent to site that could affect amenity include the existing railway line, proposed HS2 route and agricultural processes. This could present **minor negative effects**, but avoidance ad mitigation ought to be possible given the scale of the broad area. The majority of the site is green field. Most of the area is Grade 3 agricultural land (figure 2.3) and there is a small parcel of Grade 4. Some of the Grade 3 land may include Grade 3a agricultural land which is classed as best and most versatile agricultural land (BVM) but in the absence of data (post 1988 survey) it is not possible to quantify this. Therefore, purely in terms of preserving the natural

'Balsall Common East'	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
	resource of agricultural land and soils; the site will potentially have a **minor negative effect.** Taking the above factors into account, a **minor negative effect** is predicted in terms of pollution overall. Whether effects are significant is dependent upon design and location, but it ought to be possible to implement mitigation and enhancement measures.
Sustainable Communities 15. Reduce social exclusion and disparities within the Borough: 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.	There is relatively little deprivation within this broad location or surrounding areas. Therefore, development is unlikely to address imbalances in social inclusion and deprivation across the borough. Therefore, neutral effects are predicted in this respect. The additional housing and some employment development here could have positive effects with regards to provision of employment, but this is not in locations where communities are in greatest need, and is not readily accessible. The scale of housing and small scale employment development is likely to involve community infrastructure such as education facilities and recreation areas. Funds through the Community Infrastructure Levy (CIL) and planning obligations (or equivalent following planning reforms) would help fund investment in infrastructure and the public realm. However, the benefits are unlikely to be felt in communities that experience social exclusion. As a consequence, **neutral effects** are predicted overall.
16. Improve the supply and affordability of housing (particularly in the areas of greatest need): a. Ensure supply of housing appropriate to local needs, especially in relation to affordability. b. Make provision for the accommodation needs of Gypsies and Travellers.	The broad location would support delivery of a range of housing types and tenures, including the provision of affordable housing. Provision of the quantum of housing envisaged would make a major contribution to meeting the housing needs within Solihull. The proposal would also support the delivery of facilities, services and potentially some employment to support the needs of future residents. This location has some connection to Birmingham and Solihull Town through public transport links. However, housing here might not be in the areas of greatest need or those with the best connection to Birmingham. As such, **moderate positive effects** are predicted. It is unclear whether specific accommodation for Gypsies and Travellers would be suitable and attractive in this location.

‘Balsall Common East’	
SA Topics & corresponding SA Objectives	**Assumptions and rationale**
17. To fully integrate the planning, transport, housing, culture, recreation, environmental and health systems to address the social determinants of health in each locality to reduce health inequalities and promote healthy lifestyles: a. Design the urban fabric and services to meet the needs of our communities throughout their lives.	Development at this broad location would likely rely on access to a GP/health centre in Balsall Common, which is within walking distance (400m) from the boundary of the broad location. However, the majority of the area is not within reasonable walking distance. There are existing leisure and play facilities accessible from parts of the broad location, but efforts would need to be taken to improve facilities if a new community was created. Development of the scale involved and in this location should be able to deliver a range of services and facilities including retail, leisure, schools and open space. The delivery of onsite medical facilities is largely dependent on the quantum of development with offsite contributions likely at the lower end of the quantum range and medical practice at the higher end. The scale of the location is such that it could deliver a range of services and medical facilities towards the higher end of the quantum range if very large amounts of growth were involved (>3500 dwellings for example). Overall, this broad location should present the opportunity to have minor positive effects in terms of health outcomes. There are question marks over the accessibility of some parts of the site to healthcare and services via walking and cycling though.
18. Reduce crime, fear of crime and anti-social behaviour.	Development proposals can be designed to minimise opportunities for antisocial behaviour and crime. Therefore, a **neutral effect** is predicted.
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 broad location is physically distant from key employment assets within Solihull and Birmingham. However, the site benefits from good road connectivity via the A452 to key employers including NEC and Birmingham Airport, the B4101 to employment opportunities in Coventry and the proposed UK Central Hub. The urban fringe is within close proximity to bus stops with services to Solihull town centre and Coventry city centre. However, services would need to be secured through this location to ensure good accessibility. There are existing facilities in Balsall Common, and it is likely that development would also allow for the introduction of new facilities, recreation and amenities. Overall, a **minor positive effect** is predicted.

7. Appraisal of sites for potential allocation

7.1.1 To support the consideration of which sites to potentially allocate through the Local Plan, various site assessments have been undertaken through the plan-making and SA process

7.1.2 A 'Call for Sites' commenced in November 2015 and remained open until April 3rd 2020. In total, approximately 350 sites were submitted for consideration and various iterations of appraisal have been undertaken. Some sites have since been built out or received planning permission or have been allocated in adopted plans. As such, these are no longer considered to be reasonable alternatives.

7.1.3 The sites have been assessed individually, though a number of site options were initially amalgamated to larger site areas to reflect the broad areas for sustainable urban extensions or settlement expansion. The clustering of sites drew criticism from some stakeholders who wished to see each individual site be appraised separately. In response, the Council disaggregated site clusters and undertook individual assessments for each site too. This would allow for the implications of smaller scale developments to be better understood before ruling out locations on the basis of a combined assessment of sites.

7.1.4 The process of identifying reasonable site alternatives is detailed within Topic Paper 4 (November 2016). 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. These principles have been applied throughout the plan-making process when additional site options have been identified / proposed.

7.1.5 All reasonable site options have been assessed against a comprehensive range of factors, including constraints, evidence and spatial strategy. The SA is a critical piece of evidence in this respect, with each site options being appraised against the SA site assessment framework.

7.1.6 As part of the sustainability appraisal in support of the Local Plan Review AECOM has undertaken and presented site options assessments at several stages including;

- (2017) - Interim SA Report
- (2019) - Interim SA Report
- (2020) - additional sites that were received prior to the pre-submission plan being finalised.

7.1.7 The findings for the site assessments at all stages are collated within this SA Report and summarised graphically in the tables below. A detailed proforma for each site is provided in **Appendix D**.

7.1.8 The score colours are coded from dark green (most positive), light green (positive), grey (neutral / negligible issues, amber (potential constraint) to dark red (likely constraint), this is to give a broad indication of the constraints and opportunities / positive factors associated with each individual site

7.1.9 It should be remembered though that these scores do not take account of detailed mitigation that could be implemented, rather they present the 'raw data' for each site to allow for a fair and consistent comparison.

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

7.1.10 The summary table below is arranged by the broad geographical locations that the site options fall within. Each individual site has a unique AECOMID number. The site reference reflects the Council's own naming convention and has been included for completeness.

7.1.11 Several sites have been appraised in various iterations with different boundaries. For this reason, some sites have the same name, but have a different AECOM Site ID.

7.1.12 To aid in understanding, the sites are colour coded in the tables below according to the tranche of site appraisals that they were a part of.

- Sites with no shading in the Site ID and Site Name cells are from the first tranche of site assessments (These sites were presented in the 2017 Interim SA Report).
- Sites shaded **light blue** in the Site ID and Site Name Cells represent the second tranche of sites that were assessed (these sites were presented in the January 2019 Interim SA Report).
- Sites shaded **purple** in the Side ID and Site Name Cells represent the third and final tranche of sites that were assessed.

7.1.13 It should be noted that there is a data gap relating to criteria SA16 'housing deliverability' for several site options. This criteria was not reported upon for clustered site options in the first tranche of site assessments. Therefore, individual sites are also lacking this information. The information was available for some site options in the second and third tranche of appraisals, and has been included were relevant.

7.1.14 The approach to measuring impacts upon green infrastructure was updated between the first tranche of assessments and the second tranche of assessments. Therefore, the criteria are different between these phases of the site assessment process. The 2016 criteria was more subjective and was based upon site potential to enhance green infrastructure. The 2019/2020 data was updated to reflect access to natural greenspace standards and provides two separate quantitative measures.

AECOM ID	CFS 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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Solihull Urban Area and Fringes																						
46a	346	CG5 Blyth Valley Park																				
46b	346	CG5 Blyth Valley Park																				
46c	346	CG5 Blyth Valley Park																				
53		SH1 Land between Shirley and Dickens Heath																				
57	111,134,205 ,237	SA1 Land east of Widney Manor station, St Alphege																				
66	77, 131	CW1 Land btwn Chelmsley Wood & Birmingham Business Park																				
62	193, 196, 1012	CW2 Land at Bickenhill Road and Coleshill Road																				
62a	221	CW3 Helmswood Drive																?				
64	80, 87, 113, 114, 115, 178, 239	BI1 Land south/south-west of HS2 Interchange Area and A45																				
71	103, 1011	SH2 Land around Stratford Road/junction 4 M42																				
75	218	KH1 Endeavour House and Pavilions, Kingshurst																				
78	190, 226	BI2 Land west of Damson Parkway and south of A45																				
88	223	South of Shirley (Proposed new allocation)																				
101	52	Chester Road/ Moorend Avenue																				
107	51	Jensen House, Auckland Drive										?										
104	306, 245	Sharmans Cross Road										?										
109		SO3 Damson Parkway/Hampton Coppice																?				
110		KH2 Copton Crescent, Kinghurst																?				

AECOM ID	CFS 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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
112	17	SO1 South of Hampton Lane																?				
113	16	SO1 South of Hampton Lane																?				
116	20	SO1 South of Hampton Lane																?				
117	28	SO2 North of Lugtrout Lane																?				
121	143	SO2 North of Lugtrout Lane																?				
122	122	SL1 Rowood Drive																?				
123	219	SW1 Buckingham Road, Smithswood																?				
124	225	CW4 Chelmsley Wood Town Centre																?				
128	300	SO1 South of Hampton Lane																				
134	331	SA2 Widney Manor Golf Club																				
135	335	BL3 Coventry Road, S of Airport																				
136	336	BL4 Coventry Road, Elmdon																				
139	339	SO2 North of t5Lugtrout Lane																				
140	341	SW3 North Of Coleshill Road, Smithswood																				
141	400	SOL1 North of Streetsbrook Road																				
145	410	SO2 North of Lugtrout Lane																				
148	423	Widney Manor Road, Solihull																				
203	407	Land at Widney Manor Road																				
204	424	Land NE of J5 of the M42																				
210	528	Revised site 195 – Damson Parkway																				

AECOM ID	CFS 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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
216	538	The Yew Tree																				
219	552	Land at Warwick Road																				
220	553	Land South of J4 M42																				
221	555	Land between J 5&6 of M42																				
224	41	South of Shirley																				
229		**Land South of School Road – Proposed for allocation**																				
231		East of Solihull																				
232	122	South of Dog Kennel Lane																				
Balsall Common																						
76	82, 142, 198, 233, 1015	BC1 Grange Farm, btwn Kenilworth Rd and Needlers End Lane																				
76a	82	BC6 Kenilworth Rd/ Dengate Dr																?				
79	43, 238, 1017	BC2 N.of Balsall Common, Kenilworth Rd & Wootton Green Lane																				
55	101,170	BC3 SE of Balsall Common, Hob Ln, Kelsey Ln & Waste Ln																				
55a	1018	BC3																				
72	112, 204	BC4, Balsall Street																				
131	314	BC7 Leam Corner																				
137	338	BC5 West of Kenilworth Road																				
149	425	Windmill Lane, Balsall Common																				
201	304	Land at Oakes Farm																				

AECOM ID	CFS 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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
202	305	North of Balsall Common																				
225	9	**Lavender Hall Farm – Proposed for allocation**																				
226		**Trevallion Stud – Proposed for allocation**																				
227		**Pheasant Oak Farm – Proposed for allocation**																				
Catherine de Barnes																						
50	2,10, 12, 21, 83, 85, 96, 106, 1001	CB1 Land at Bickenhill Lane, Hampton Lane and Lugtrout Lane – **Proposed for allocation**																				
Dickens Heath																						
48	8, 22, 84, 192, 209, 1005	DH1 Land between Dickens Heath and Tidbury Green																				
118	58	DH2 Cleobury Lane																?				
127	140	DH3 Tythebarn Lane																?				
132	316	DH2 Cleobury Lane																				
138	340	DH3 Tythebarn Lane																				
152	318	DH3 Tythebarn Lane																				
211	531	Land at Braggs Farm Lane																				
213	535	Cleobury Lane - WM21924																				
214	536	Cleobury Lane - WM12915																				
215	537	Cleobury Lane - WM47626																				

AECOM ID	CFS 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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (2019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Hampton in Arden																						
63	6	HA1 Old Station Road, Hampton in Arden																				
68	171	HA2 Hampton Manor, Hampton in Arden																				
65	46,94	HA3 Meriden Road/Diddington Lane , Hampton in Arden																				
147	418	Diddington Lane, Hampton																				

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	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Knowle																						
52	59,98,110	KN1 Land at Kenilworth Road, Knowle																				
52a	59	KN6 North of Kenilworth Road																?				
52b	98	KN7 South of Kenilworth Road																?				
52c	110	KN7 South of Kenilworth Road																?				
56	5,63,68,97, 107,167,234	KN2 Land around Warwick Road, junction 5, M42																				
80		KN3 Copt Heath Golf Club																				
54	3,72,88,104, 207	KN4 Land at Smiths Lane and Widney Manor Road																				
120	118	KN5 Warwick Road, Rotten Row																?				
133	319	KN5 Warwick Road, Rotten Row																				
205	502	Land off Jacobean Lane																				
208	526	Land inc 15 Jacobean Lane																				
218	547	Land off Jacobean Lane																				
Dorridge																						
60	104,135,241	DO1 E.of Dorridge, Blue Lake Rd, Grove Rd, Norton Green Ln																				
58	29,127,199, 210	DO2 SW Dorridge, off Earlswood Road and Four Ashes Road																				
108	109	DO3 South of Grove Road																?				
146	413	DO3 South of Grove Road																				
207	525	Land Darley Green Road																				
209	527	Land at Four Ashes Road																				

	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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
222	558	Blossomfield Sports Club																				
223	559	Land off Four Ashes Road																				
Meriden																						
61	186,187,211, 1014	ME1 East of Meriden, between Fillongley Road and Main Road																				
47	35,81,144	ME2 North of Fillongley Road, Meriden																				
74	197	ME3 South of Meriden, Berkswell Road																				
142	402	ME4 Cornets End Lane Minerals																n/a				
144	409	ME4 Cornets End Lane Minerals																				
153	420	Birmingham Road, Meriden																				
200	128	Area G, Meriden																				
233	522	South East of Meriden																				
212	532	Berkswell Quarry, Meriden																				
Cheswick Green																						
73	168,173	CG1 Winterton Farm																				
51	99,133,217	CG2 North/north-east Cheswick Green, Creynolds Lane / Tanworth Lane																				
69	44,45,48,123	CG3 West of Blythe Valley Park, land at Warings Green Lane																				
114	62	CG4 Stratford Road / Creynolds Lane																?				
129	302	CG4 Stratford Road / Creynolds Lane																				

	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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Hockley Heath																						
67	32,165,203,1003	HH1 Box Trees, Kineton Lane, Stratford Rd, Hockley Heath																				
59	12,28,49,57,120,121,145,175,180,208,1006,1008	HH2 West of Hockley Heath, off School Road and Stratford Road																				
59a	417	West of Stratford Road, Hockley Heath																				
70	70,141	HH3 Land north of Earlswood station, Rumbush Ln & Wood Ln																				
Barston																						
119	6	BA1 Barston																?				
Chadwick End																						
86	19,32,40,246	CE1 Land at Chadwick End, off Warwick Rd & Netherwood Ln																				
86a	19	CE2 East of Warwick Road																?				

	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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Berkswell																						
83	89,90	BE1 Land at Coventry Rd and Spencers Lane, Berkswell																				
82	76,212	BE2 Berkswell Quarry, Cornets End Lane and Kenilworth Road																				
85	212	BE3 Former Berkswell Quarry, Cornets End Lane																				
84	216	BE4 Lincoln Farm Café & Lorry Park, Kenilworth Rd, Berkswell																				
81	9	BE5 Land at Lavender Hall Farm, Lavender Hall Lane																				
49	66	BE6 Land at Back Lane/Broad Lane, Berkswell																				
150	426	Broad Lane, Berkswell																				
Tidbury Green																						
77	24,69.37, 206	TG1 East of Tidbury Green, Cleobury Lane and Norton Lane																				
115	74	WE1 West of Tilehouse Lane																?				
125	225	WE1 West of Tilehouse Lane																?				
126	18	WE1 West of Tilehouse Lane																?				
130	313	TG2 Fulford Hall Road																				
143	404	TG3 West of Rumbush Lane																				
151	313	TG2 Fulford Hall Road																				
154	313	TG2 Fulford Hall Road																				

	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 (2016)	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
Other / rural																						
206	524	Land East Nailcote Farm																				
217	544	Broad Lane, Hawkhurst																				
228		Oak Farm																				
230		Barretts Farm																				
Sites proposed for allocation at preferred options																						
97	30,33, 102,169, 236,1002	Barratts Farm (Proposed new allocation)																				
98	75	Frog Lane (Proposed new allocation)																				
99	47,138	Windmill Lane - Kenilworth Road (Proposed new allocation)																				
87	126,130, 176	West of Dickens Heath (Proposed new allocation)																				

	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	SA11a: Distance to Greenspace >2ha (2019)	SA11b: Distance to Greenspace >20ha (1019)	SA12. Enhance and protect historic assets	SA14. Amenity	SA16: Housing Delivery	SA17a. Distance to healthcare	SA17b. Access to leisure facilities	SA19a. Distance to Key Economic Assets	SA19b Distance to convenience stores or supermarket
96	117,129	Meriden Road (Proposed new allocation)																				
102	229	Kingshurst Village Centre (Proposed new allocation)										?										
91	213	Hampton Road (Proposed new allocation)																				
92	166	Hampton Road (Proposed new allocation)																				
90	148-154,156,157,303,1010	South of Knowle (Proposed new allocation)																				
100	119,137	West of Meriden (Proposed new allocation)																				
89	122	South of Dog Kennel Lane (Proposed new allocation)																				
93	11,15,67,147,230	East of Solihull (Proposed new allocation)																				
105	222,301	Moat Lane, Vulcan Road (Proposed new allocation)										?										
95	132	UK Central Hub/HS2 interchange (Existing Mixed Use Allocation)																				
94	317,65,95,189,190,191,202,228	Land at Damson Parkway (Existing Employment Allocation)																				

7.2 Outline Reasons for the proposed allocation of housing sites

7.2.1 The Spatial Strategy for the Local Plan Review was based on 7 broad options for accommodating growth, set out in the Scope, Issues and Options consultation 2015.

7.2.2 These demonstrate that there is limited opportunity for housing growth outside the Green Belt. The focus has been on the UK Central masterplan and HS2 growth strategy, larger scale developments providing opportunities for significant infrastructure improvements, and smaller scale sites to ensure early delivery of housing supply.

7.2.3 Details of the approach are set out in the Reviewing options for growth and site selection process topic paper published in 2016.

7.2.4 The detailed Site Selection Methodology is set out in the Supplementary Consultation 2019. This gives priority to brownfield sites, sites outside the Green Belt, and accessible locations in lower performing Green Belt locations. All sites submitted for consideration have been through this process and the findings are set out in the detailed site assessments.

8. Developing the employment strategy

8.1 Discussion

8.1.1 The economic strategy for the Plan (review) is driven by the unique opportunities that the UK Central proposals present. This location is a nationally significant scheme that will contribute to the economic growth aims of the Council, the WMCA and the GBSLEP.

8.1.2 Given the importance of the UK Central area and The Hub (which encompasses proposed HS2 interchange), the Council do not consider that there are other alternative strategies for the delivery of such growth.

8.1.3 Site 19 provides the opportunity to make more efficient use of the land required for the station, by using multi-storey parking rather than surface parking as proposed by the HS2 Company.

8.1.4 This creates the opportunity for significant employment land within the UK Central Hub Area building on the advantages presented by the proximity of the Airport, NEC, Jaguar Land Rover (JLR) and Birmingham Business Park. It is acknowledged that the jobs provided will meet wider needs across the sub-region.

8.1.5 Local employment needs, as evidenced in the Housing and Economic Development Needs Assessment 2020, and those specifically relating to Jaguar Land Rover are being addressed through existing commitments and the allocation of Employment Site 20.

8.1.6 Whilst this site was primarily aimed at JLR needs in the Draft Local Plan, much of these needs have been addressed by permissions within the site area. The Local Plan Review indicates that the site will meet local employment needs more generally. As well as being in close proximity to JLR and the Airport, Site 20 is within the area identified in the GBHMA Strategic Growth Study for further investigation for employment led growth.

Part 3: Appraisal of the Pre-Submission Local Plan Review

9. Plan Appraisal Methods

9.1.1 Each Policy within the 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 9.1 below.

9.1.2 For each SA objective, the guiding questions and overall objectives 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

9.1.3 For example, a permanent negative effect, of regional scale that is likely to occur would be classified as major positive in terms of significance. A locally specific negative effect that lasts less than 3years and is reversible would be minor negative in terms of significance.

Table 9.1: 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		

9.1.4 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.

9.1.5 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.

9.1.6 The appraisal of policies took place at issues and options and draft Plan stage. This latest assessment considers the policies at Pre-Submission stage, making reference to how changes have affected the SA findings (if at all).

9.1.7 Complete matrices which inform the policy appraisals have been prepared in a separate technical spreadsheet document. This provides the rationale behind every element of the appraisals.

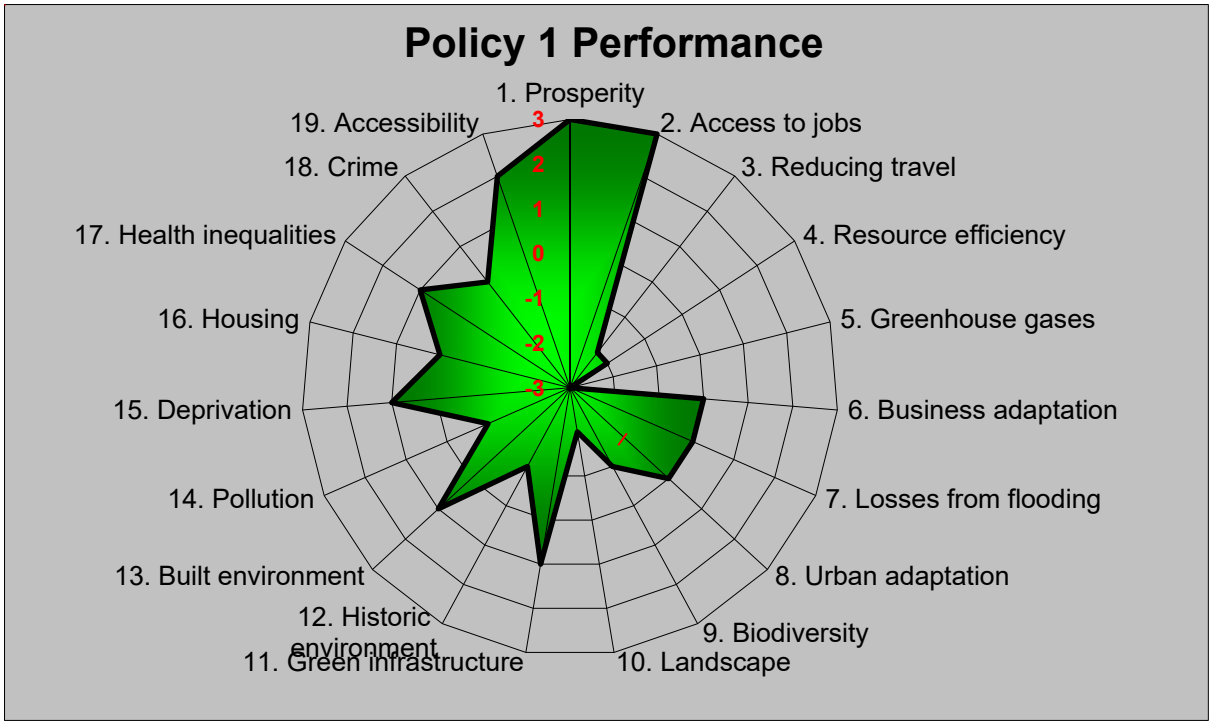
10. Appraisal findings

10.1 Appraisal of Policy 1: UK Central Hub Area

Forecast Effects

10.1.1 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 10.1. Conversely, eight of the 19 sustainability objectives report an adverse outcome (four 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 10.1. Sustainability Appraisal: Policy 1



SA Objective	Likely Significance	Rationale
1. Prosperity	Maj +ve	The Policy supports growth at Birmingham Airport, NEC, Arden Cross, Birmingham Business Park and Jaguar Land Rover (JLR) and provides for controlled diversification of employment opportunities. The policy further sets aside land to support the future growth of JLR, which could help safeguard the long-term operations and potential growth of this major employer.
2. Access to jobs	Maj +ve	The Policy is likely to reduce difficulties to access employment through the provision of improved connectivity within and beyond the growth areas. The policy seeks to support inclusive growth, which ought to contribute to positive effects.
4. Resource efficiency	Mod -ve	Efficiencies could be gained by exploiting existing employment centres given established networks. However, 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. The policy encourages a phased approach to development to ensure the

SA Objective	Likely Significance	Rationale
		efficient use of land resources, which reduces the potential effects somewhat.
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, which could attract people from further afield (assuming working practice trends are not irreversibly changed by the Covid 19 Pandemic).
5. Greenhouse gases	Mod –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 contribute to increased greenhouse gas 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.

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

10.1.2 The effects arising from this 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. Seven of the impacts are direct with six being indirect and the effects on greenhouse gases being a cumulative effect.

10.1.3 The policy is 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.

10.1.4 Though public transport and other modes of transport are supported through other plan policies, a moderate 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).

10.1.5 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.

10.1.6 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.

10.1.7 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.

10.1.8 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 some 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 though.

Uncertainty

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

Influence of policy changes

10.1.10 The draft policy has been updated to require inclusive growth, but does not set out specific measures to ensure this happens. Whilst a positive change, it does not affect the appraisal findings (which already predicted a major positive in relation to prosperity and access to jobs).

10.1.11 The policy further sets out measures to ensure development makes efficient use of land resources. This leads to a change in the score from major negative (at draft Plan stage) to moderate negative with regards to the resource efficiency objective.

10.1.12 Additional requirements for development to create distinct and unique places with a strong sense of identity is positive in relation to the built environment. However, the effects are still predicted to be minor positive for this objective. This is because high quality design should be delivered regardless through other plan policies and the policy does not provide further detailed design guidance or codes to ensure a set standard of design is achieved.

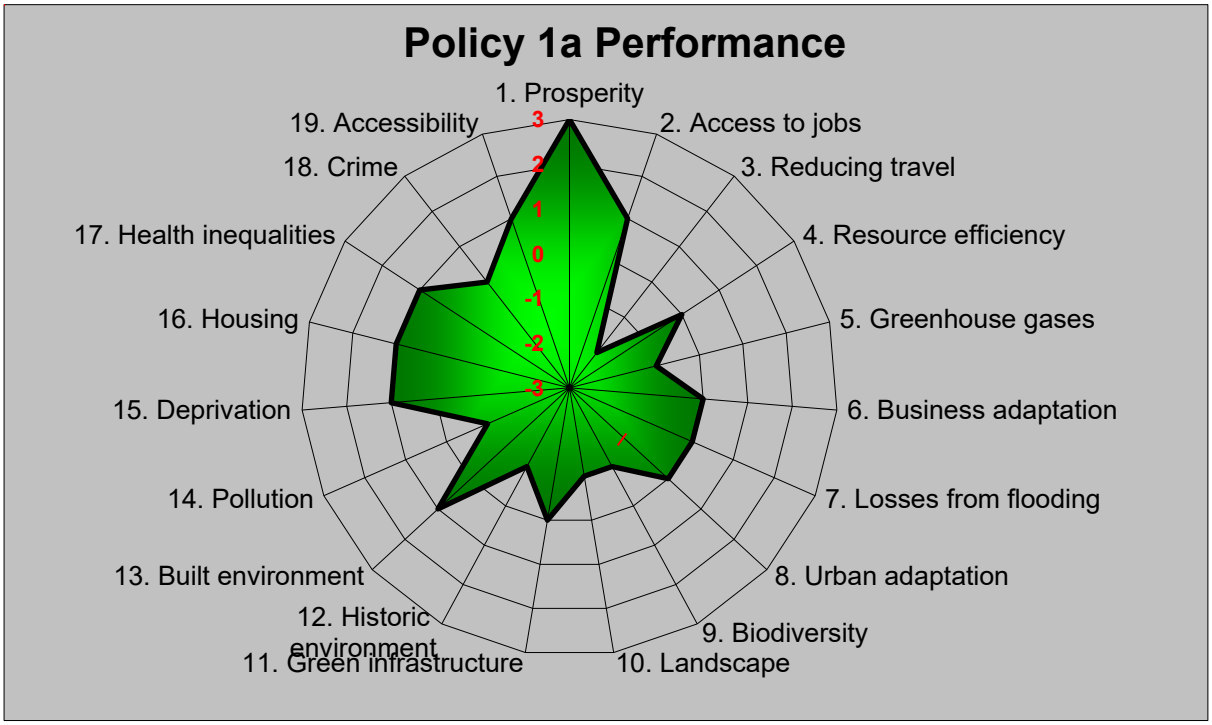
10.2 Appraisal of Policy 1A: Blythe Valley Business Park

Forecast Effects

10.2.1 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 10.2 below). The remaining six outcomes are neutral.

10.2.2 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 10.2. Sustainability Appraisal: Policy 1A



SA Objective	Likely Significance	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 / require travel plans. This could lead to moderate negative effects, though other plan policies should help to mitigate

		effects by promoting sustainable modes of travel.

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

Influence of policy changes

10.2.3 The changes to the policy to support and encourage Class E uses instead of the since removed Class B1, A1 to A5 is not predicted to have a significant effect.

10.2.4 The policy was already broadly supportive of the diverse uses that fall under this use class. Other changes to the policy also do not change the significance of any effects against the sustainability objectives.

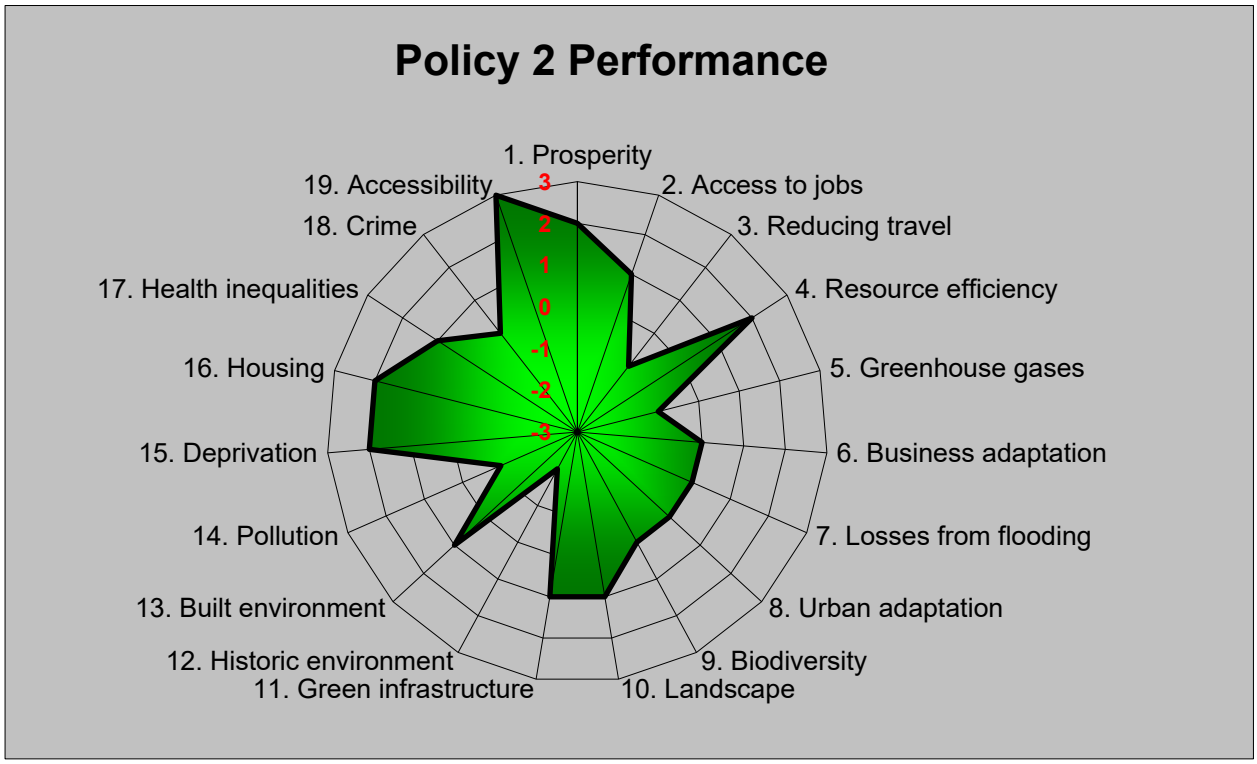
10.3 Appraisal of Policy 2: Maintain Strong, Competitive Town Centres

Forecast Effects

10.3.1 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 10.3).

10.3.2 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 10.3. Sustainability Appraisal: Policy 2



SA Objective	Likely Significance	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.

SA Objective	Likely Significance	Rationale
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.

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

10.3.3 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.

10.3.4 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.

10.3.5 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.

10.3.6 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 delivery 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.

Uncertainty

10.3.7 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.

Influence of policy changes

10.3.8 There are a number of changes to the town centre masterplan principles including text on the role of the new interchange station and an increase in the total new development that could be delivered in the town centre. This is predicted to have a minor positive effect on accessibility, resource efficiency and prosperity as it would support improvements in transport infrastructure and new development that would improve accessibility, further reduce the demand for out of town commercial development and expansion of commercial, leisure and office development. These effects are predicted to be minor as these principles form part of a masterplan that in the absence of the Local Plan should support the delivery of such changes.

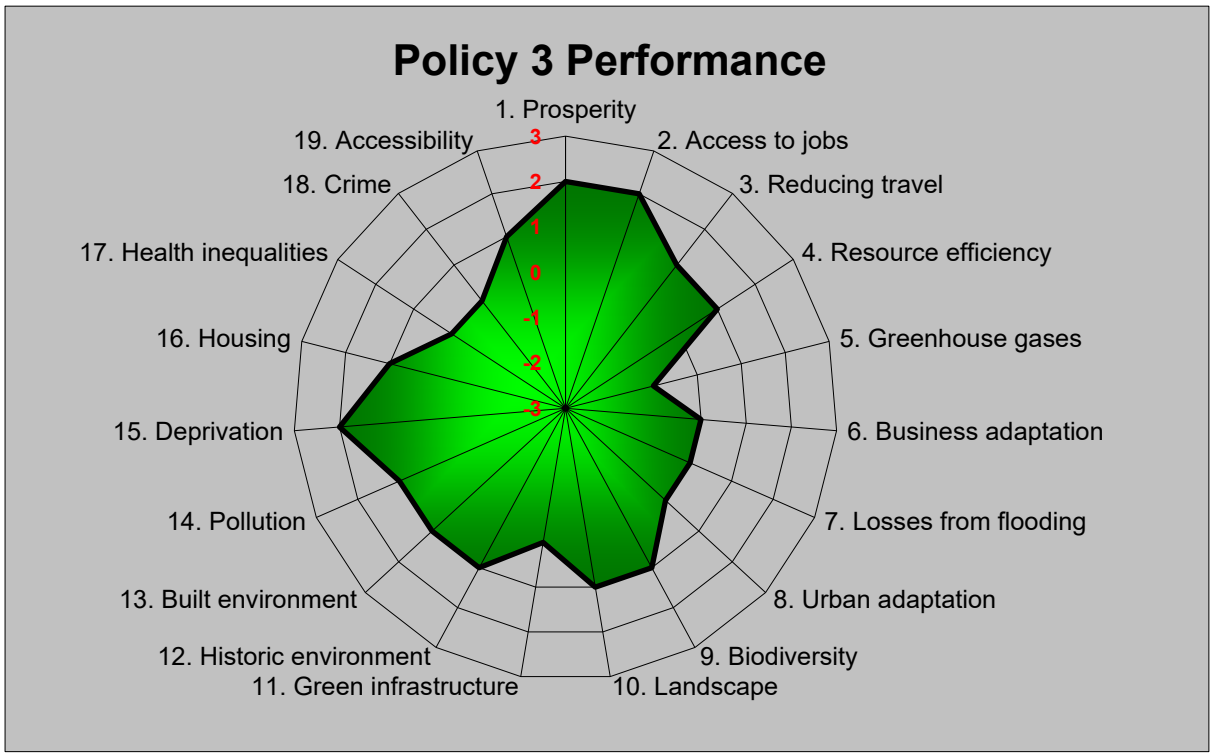
10.3.9 Requirements for new developments on the edge of Chelmsley Wood town centre to encourage a diverse range of uses to better meet local needs and to adapt to changing retail markets is predicted to have a minor positive effect on resource efficiency, as it should ensure land resources are utilised and adaptive to changing local needs. These effects are not predicted to change the overall score of moderate positive.

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

Forecast Effects

10.4.1 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 10.4). 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 10.4. Sustainability Appraisal: Policy 3



SA Objective	Likely Significance	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.

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

10.4.2 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.

10.4.3 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.

10.4.4 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.

Uncertainty

10.4.5 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.

Influence of policy changes

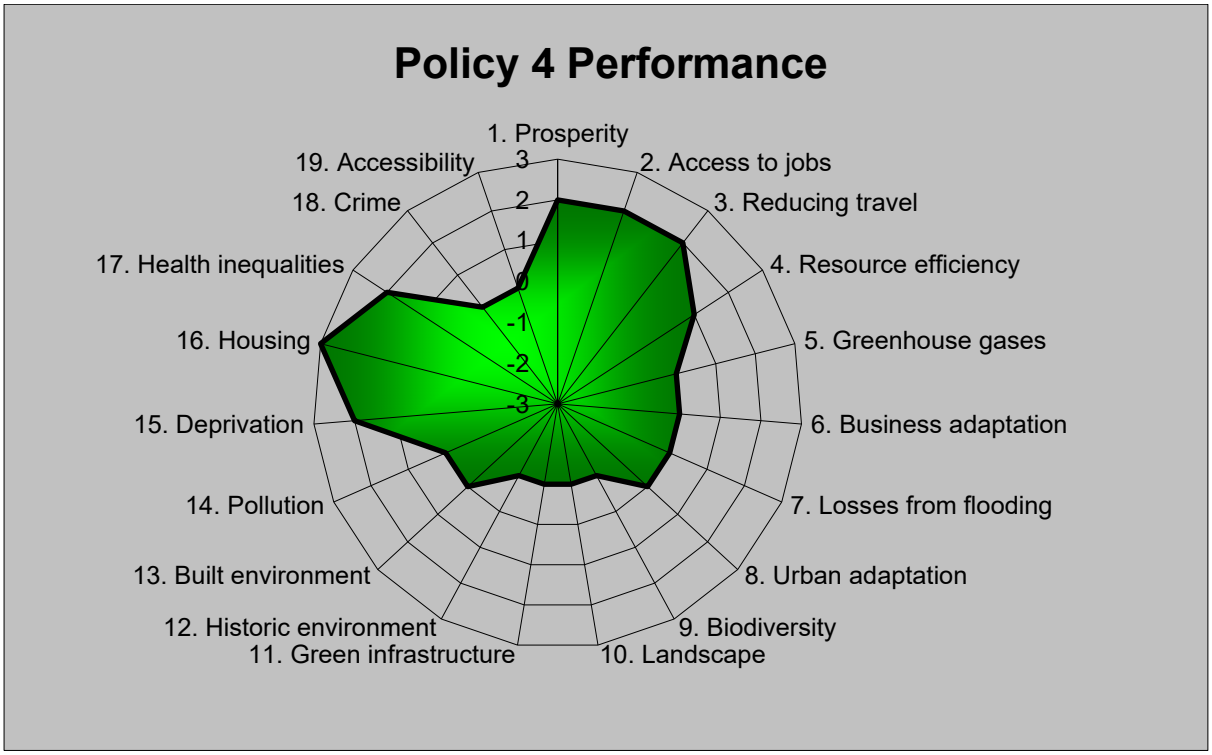
10.4.6 Some minor policy changes have been made which refer to the need to adhere to made Neighbourhood Plan policies. These changes are for clarity and to make the links between different Local Plan documents. Therefore, the outcome in terms of effects in the sustainability appraisal have not changed.

10.5 Appraisal of Policy 4: Meeting Housing Needs

Forecast Effects

10.5.1 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 10.5). 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 10.5. Sustainability Appraisal: Policy 4



SA Objective	Likely Significance	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.

SA Objective	Likely Significance	Rationale
17. Health Inequalities	Mod +ve	Strong relationship exists between quality of housing and health. New affordable housing has potential to assist in reducing health inequalities. The Council will identify the tenure, mix and type of the homes and any requirements for homes to be designed to meet specific needs such as those of older or disabled people.

Local	5	*Unlikely*	0	*Direct*	7	*Positive*	7	Maj +ve	1
Borough	6	*Potential*	8	*Indirect*	4	*Negative*	4	Mod+ve	5
Regional	0	*Likely*	3	*Cumul*	0			Min+ve	1
National	0	*Definite*	0					Neutral	8
								Min-ve	4
								Mod-ve	0
								Maj -ve	0

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

10.5.3 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.

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

Uncertainty

10.5.5 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.

Influence of policy changes

10.5.6 Changes to the policy will increase the proportion of development that would be required to make affordable housing contributions but also reduces the proportion of units of a development that are required to be affordable. This is likely to result in a slight reduction in affordable housing delivery overall. However, affordable housing requirements are influenced by changes in viability and a higher than viability affordable housing requirement is unlikely to still result in additional affordable housing units being delivered. Therefore, positive effects are still likely to occur.

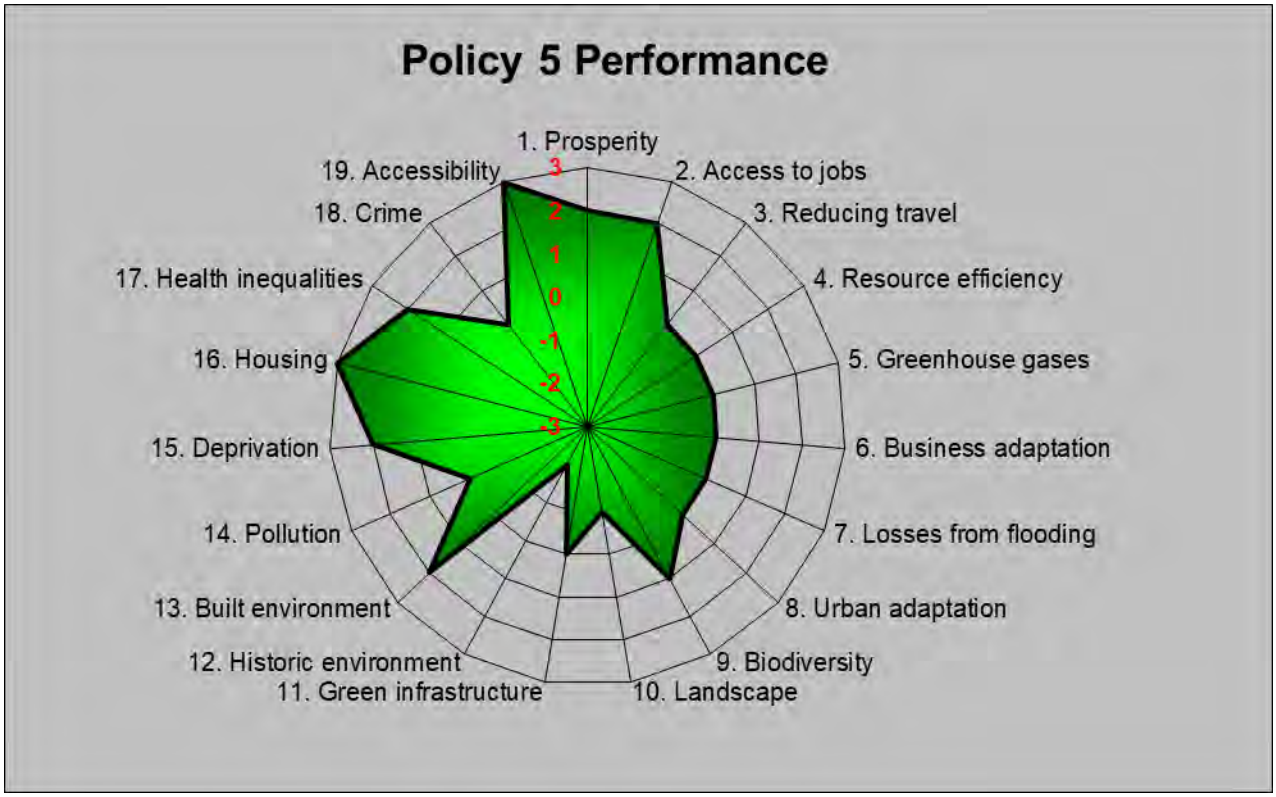
10.5.7 The policy is strengthened in relation to Housing for Older and Disabled people. Specific requirements and targets are set to ensure that the needs of specialist groups are met, including care homes, and disabled groups. This should help to ensure that groups that may be disproportionately affected by health issues are provided with the accommodation they need, having benefits in this respect. As a result, a moderate positive effect is predicted rather than minor positives.

10.6 Appraisal of Policy 5: Provision of Land for Housing

Forecast Effects

10.6.1 Given that this policy sets out the housing target and supporting allocations, the effects of this policy are closely related those predicted for the housing strategy (Option 2A). These effects are summarised visually in figure 10.6 below.

Figure 10.6. Sustainability Appraisal: Policy 5



SA Objective	Likely Significance	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
2. Access to jobs	Mod +ve	The strategy supports growth in areas where housing and employment will be well related. 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.
12. Historic Environment	Mod -ve	The delivery of at least 15000 homes during the life of the plan has the potential for negative effects on the historic environment. Several sites are in proximity to heritage assets whose setting could be affected negatively. The nature and significance of effects will ultimately be dependent on the mitigation measures that are secured. However, potential for a moderate long-term effect on heritage assets is predicted as a result of impacts on their setting.

SA Objective	Likely Significance	Rationale
13. Built Environment	Mod +ve	New housing is to contribute towards maintaining local character and distinctiveness. In certain locations it may also be possible that new high quality environments will be created in gateway locations, which could be positive in terms of the built environment.
15. Deprivation	Mod +ve	Development in the urban areas, accessible locations and close to North Solihull could have benefits for deprived communities in Solihull and further afield.
16. Housing	Maj +ve	The policy makes provision to allocate land to ensure sufficient housing land supply to deliver 15,000 homes in the plan period. This will meet local needs and a proportion of unmet needs from Birmingham. A range of housing sites and locations are proposed across the district, which gives a degree of certainty that positive effects will arise.
17. Health Inequalities	Mod +ve	Enhanced housing typically leads to health benefits, and this could help to address inequalities.
18. Accessibility	Maj +ve	Development ought to be located in areas that have good or adequate accessibility to services, jobs and facilities.

Local	6	*Unlikely*	0	*Direct*	9	*Positive*	10	Maj +ve	2
Borough	8	*Potential*	10	*Indirect*	5	*Negative*	4	Mod+ve	6
Regional	0	*Likely*	4	*Cumul*				Min+ve	1
National	0	*Definite*	0					Neutral	9
								Min-ve	1
								Mod-ve	1
								Maj -ve	0

10.6.2 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.

10.6.3 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.

10.6.4 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.

10.6.5 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.

10.6.6 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.

10.6.7 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.

10.6.8 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).

10.6.9 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.

Uncertainty

10.6.10 For the negative outcomes that are predicted, the effects are recorded as ‘potential’. This suggests that negative effects could potentially be mitigated through good design and strong application of other plan policies.

10.6.11 In terms of the positive effects, four are predicted to be likely, and three as having the ‘potential’ to occur. Hence there is some uncertainty in how the policy would perform in practice (when considered in isolation from all other plan policies).

Influence of policy Changes

The spatial strategy includes development in areas that could lead to negative effects on the setting of heritage assets. This heightens the policy effects from minor to moderate negative.

Effects on landscape are mixed, with some benefits arising as well as negative effects. This reduces the initial moderate negative effects that were identified.

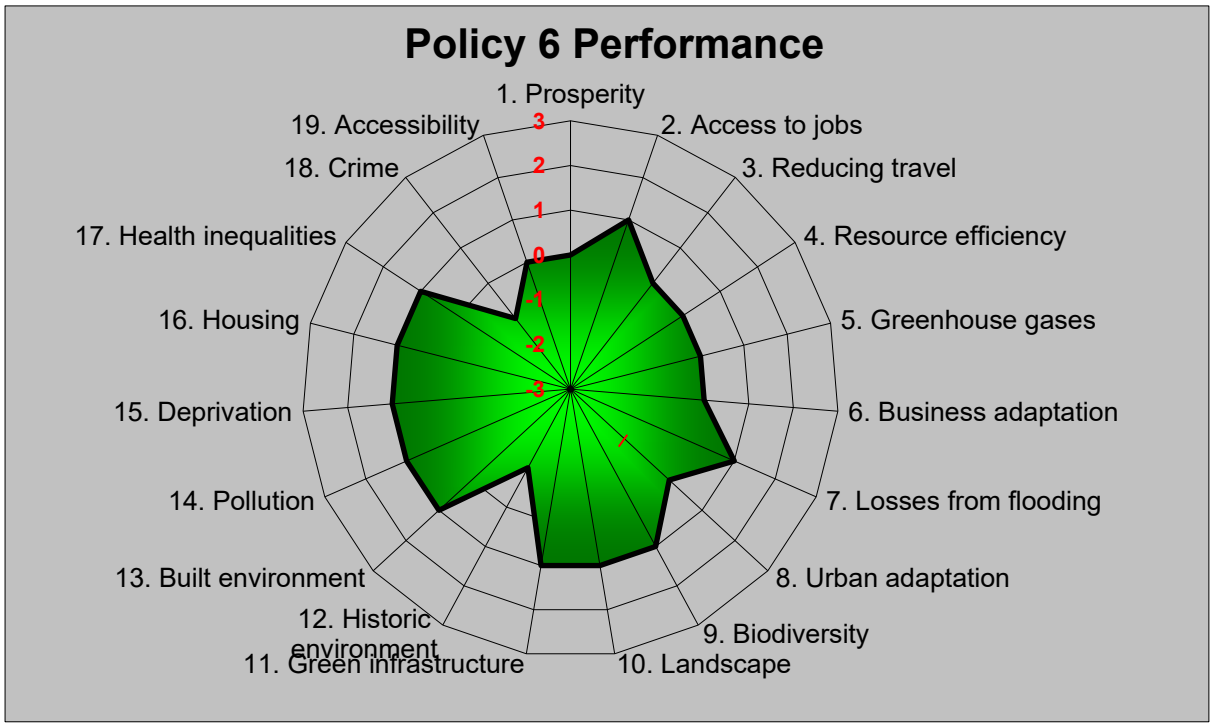
The significance of effects are predicted to be greater in relation to deprivation and the built environment. This relates to opportunities for regeneration being enhanced.

10.7 Appraisal of Policy 6: Provision of Accommodation for Gypsies and Travellers

Forecast Effects

10.7.1 This policy was assessed as giving rise to ten minor positive, seven neutral and two minor negative effects (see Figure 10.7). 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 10.7. Sustainability Appraisal: Policy 6



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

10.7.2 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.

10.7.3 The most obvious positive effects are noted in relation to social factors such as the provision of specific accommodation needs, and how this benefits particular groups and could address deprivation. The criteria involved cover a range of sustainability factors, but are standard measures that would be expected of such developments. No specific new sites are identified for allocation in the policy and therefore, effects are minor.

Uncertainty

10.7.4 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.

Influence of policy changes

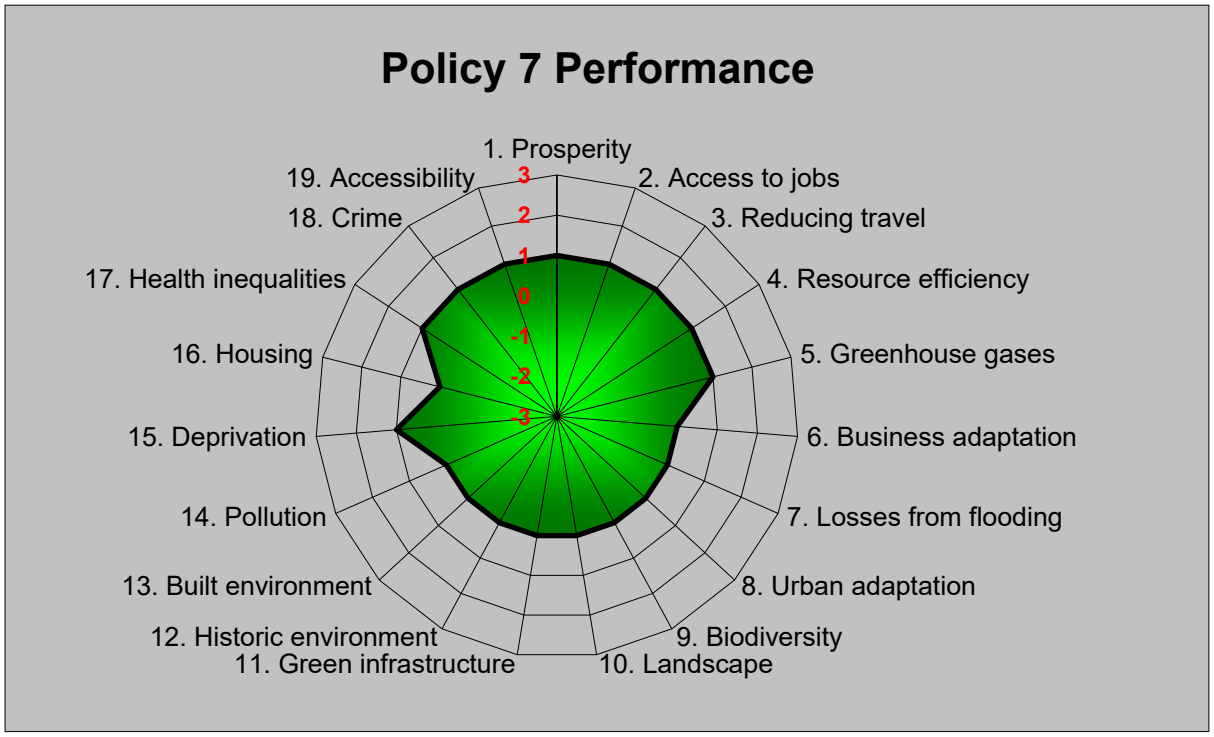
10.7.5 No materially significant changes have been made to the policy, and therefore the effects remain the same.

10.8 Appraisal of Policy 7: Accessibility and Ease of Access

Forecast Effects

10.8.1 This policy performs in a slightly positive manner with nine of the nineteen sustainability objectives reporting a minor beneficial outcome (see Figure 10.8) 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 10.8. 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

10.8.2 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.

10.8.3 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 with high frequency. 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.

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

10.8.5 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.

10.8.6 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.

Managing Uncertainty

10.8.7 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.

Influence of policy changes

10.8.8 The policy makes additional reference to the importance of walking and cycling and for development to demonstrate that access is prioritised for pedestrians and cyclists. This is a positive change, and will have minor benefits with regards to health inequalities, reducing travel and greenhouse gases. The overall scores remain the same as the draft Plan stage though.

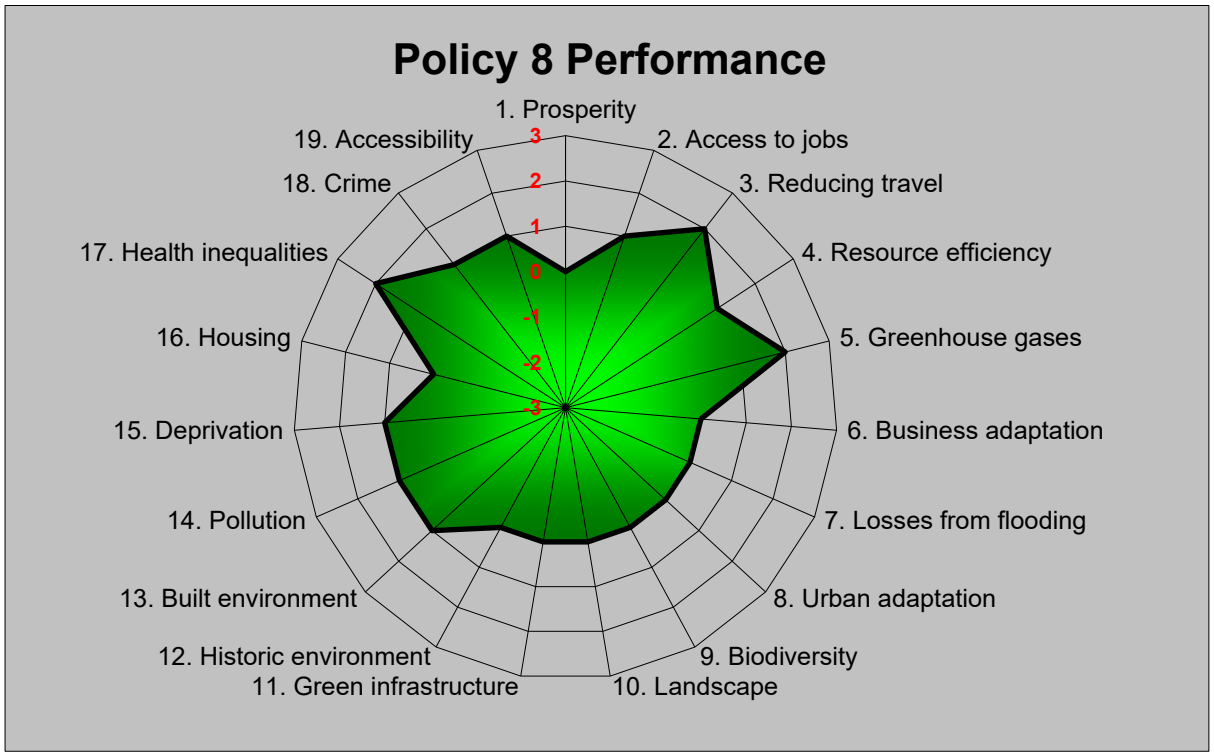
10.9 Appraisal of Policy 8: Managing Travel Demand and Reducing Congestion

Forecast Effects

10.9.1 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.

10.9.2 The other impacts are either neutral or minor positive (see Figure 10.9) 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 10.9. Sustainability Appraisal: Policy 8



SA Objective	Likely Significance	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.

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

10.9.3 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.

Uncertainty

10.9.4 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.

Influence of policy changes

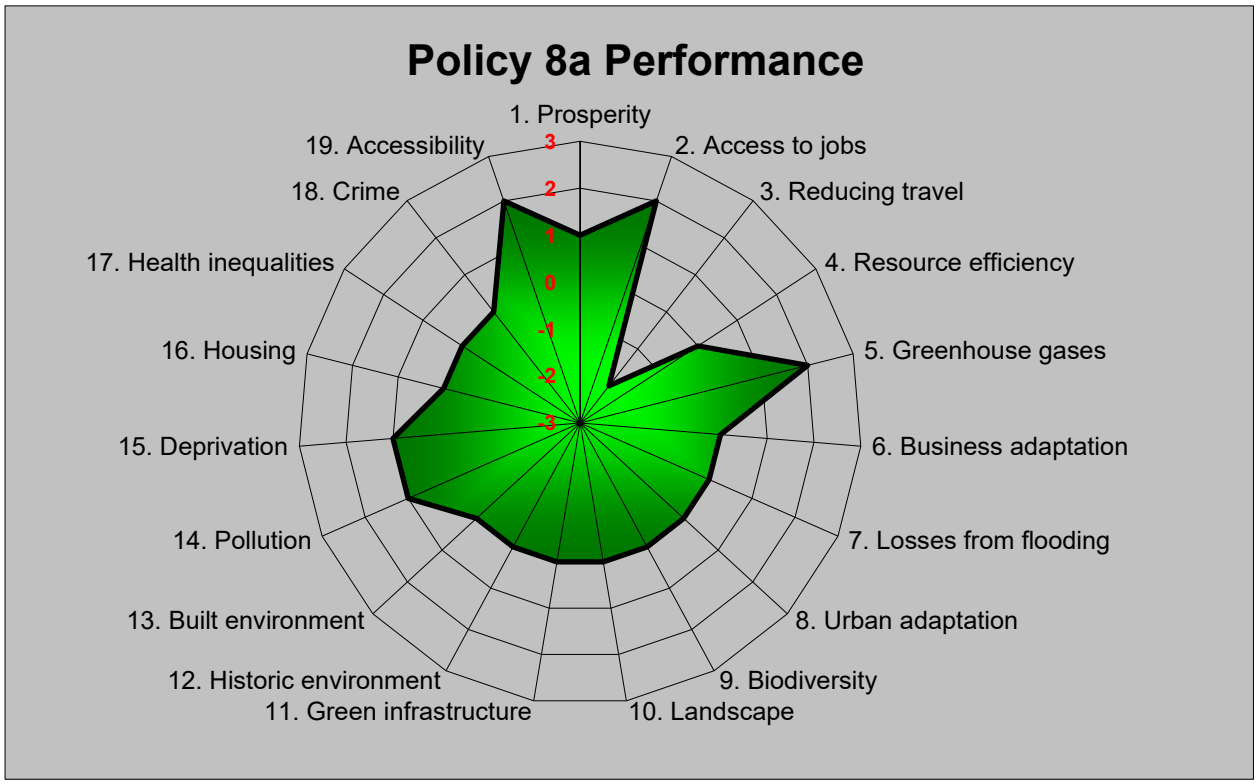
10.9.5 The changes to the policy are not material and do not change the significance of any effects against the sustainability objectives.

10.10 Appraisal of Policy 8a: Rapid Transit

Forecast Effects

10.10.1 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 10.10. Sustainability Appraisal: Policy 8a



SA Objective	Likely Significance	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

SA Objective	Likely Significance	Rationale
17. Accessibility	Mod +ve	Rapid transport should help to improve accessibility both within and outside the Borough.

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

Uncertainty

10.10.2 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).

10.10.3 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.

Influence of policy changes

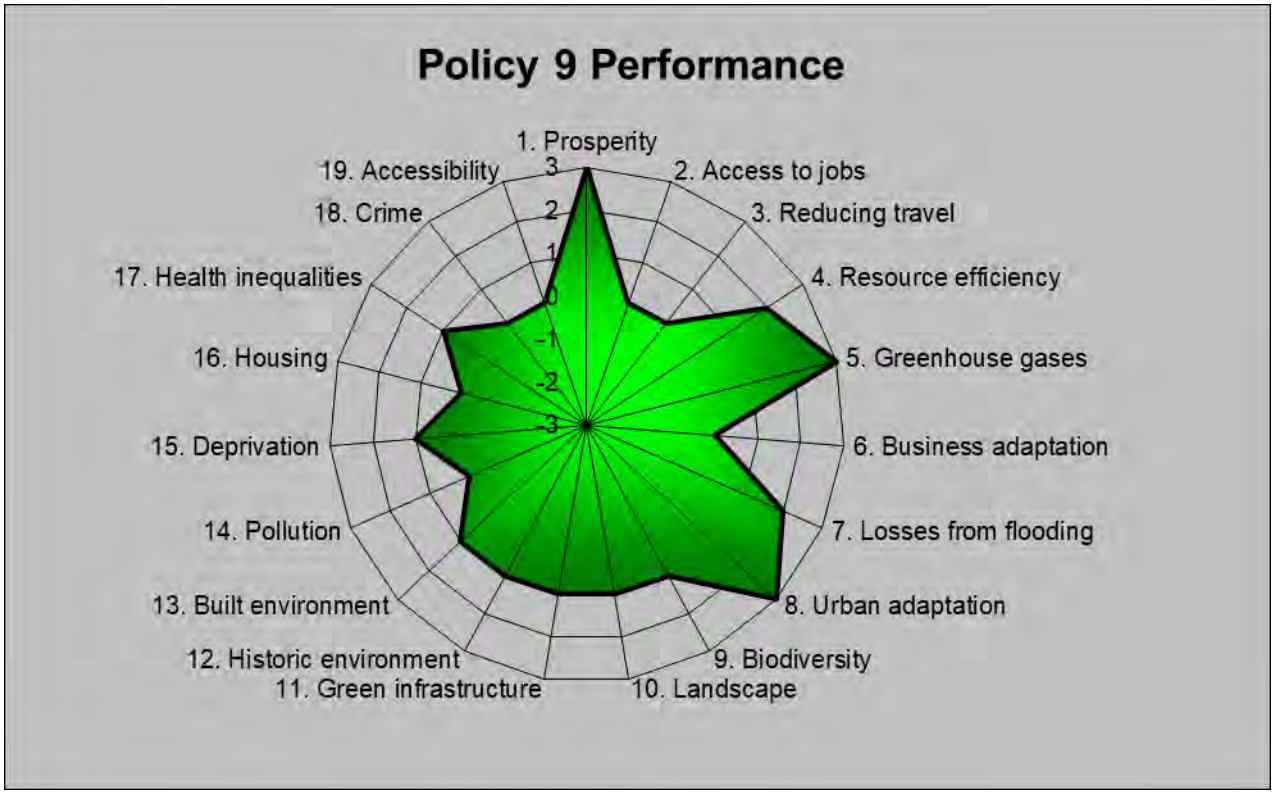
10.10.4 No significant changes made.

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

Forecast Effects

10.11.1 This policy performs in a positive manner with twelve of the nineteen sustainability objectives reporting a positive effect. Of these, three are major positives and two are moderate positives as illustrated in Figure 10.11 and discussed in the table below. A further six effects are predicted to be neutral.

Figure 10.11. Sustainability Appraisal: Policy 9



SA Objective	Likely Significance	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 seeks to increase the use of construction materials with higher environmental performance, use resources more effectively and demonstrate high quality design.
5. Greenhouse gases	Maj +ve	The minimisation of greenhouse gas emissions is a key focus of this policy. The policy would lead to the more efficient use of energy particularly given the requirement to exceed building regulation efficiency standards, to reduce embodied energy in developments and to require a climate change assessment. These measures go beyond what would likely occur in the absence of the policy and therefore major significant positive effects would be anticipated. There is also requirements for at

SA Objective	Likely Significance	Rationale
		least 15% renewable or low carbon energy for major housing developments should reduce greenhouse gas emissions.
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.

Local	8	*Unlikely*	0	*Direct*	8	*Positive*	12	Maj +ve	3
Borough	5	*Potential*	7	*Indirect*	3	*Negative*	1	Mod+ve	2
Regional	0	*Likely*	4	*Cumul*	2			Min+ve	8
National	0	*Definite*	2					Neutral	6
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

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

10.11.3 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.

10.11.4 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.

10.11.5 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.

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

10.11.7 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.

10.11.8 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.

10.11.9 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.

10.11.10 Being focused upon climate change, the policy is expected to deliver significant reductions in greenhouse gas emissions and also aid urban adaptation, in both cases resulting in major beneficial outcomes. In terms of recommendations, by identifying specific opportunity areas for renewable energy (particularly wind), there would be more certain that a significant shift towards carbon neutrality.

10.11.11 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 and two neutral (historic environment and pollution).

10.11.12 The policy, alongside the 2016 Building Regulations, is expected to contribute to reduced emissions and enhanced adaptation to the effects of climate change. It should also help to promote clean air. 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.

Uncertainty

10.11.13 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.

Influence of policy changes

10.11.14 The draft Policy has undergone substantial changes that strengthen its contribution towards climate change mitigation and adaptation.

10.11.15 In particular, there are now firm targets for energy and carbon emissions reductions, for the use of renewables, the need for electric charging and for robust adaptation measures. These are all positive measures that improve the performance of this policy in terms of climate change, resource use and pollution in particular.

10.11.16 Measures to seek low carbon and sustainably sourced building materials wherever possible is also predicted to have positive effects on the resource efficiency objective, although these effects do not change the previous score predicted for this policy of moderate positive.

10.11.17 There have been several policy wording changes that have moved the emphasis from encouragement to requirements In particular, this includes positive effects in terms of climate change mitigation, reducing the need to travel via private vehicle and maximises the use of sustainable forms of transport.

10.11.18 Amendments to the policy wording to attach significant weight to the installation of district low carbon and renewable energy schemes is likely to result in minor positive effects on related objectives, as it increases the likelihood of such developments occurring and the effects to be realised.

10.11.19 Requirements for development to include electric vehicles charging points should increase infrastructure availability for electric vehicles and indirectly support the consumer change towards the low carbon alternative, which is predicted to have a minor positive effect on the greenhouse gasses and pollution objectives (an improvement on the draft Policy scores). This is predicted to change the minor negative effect on the pollution objective to minor positive effects.

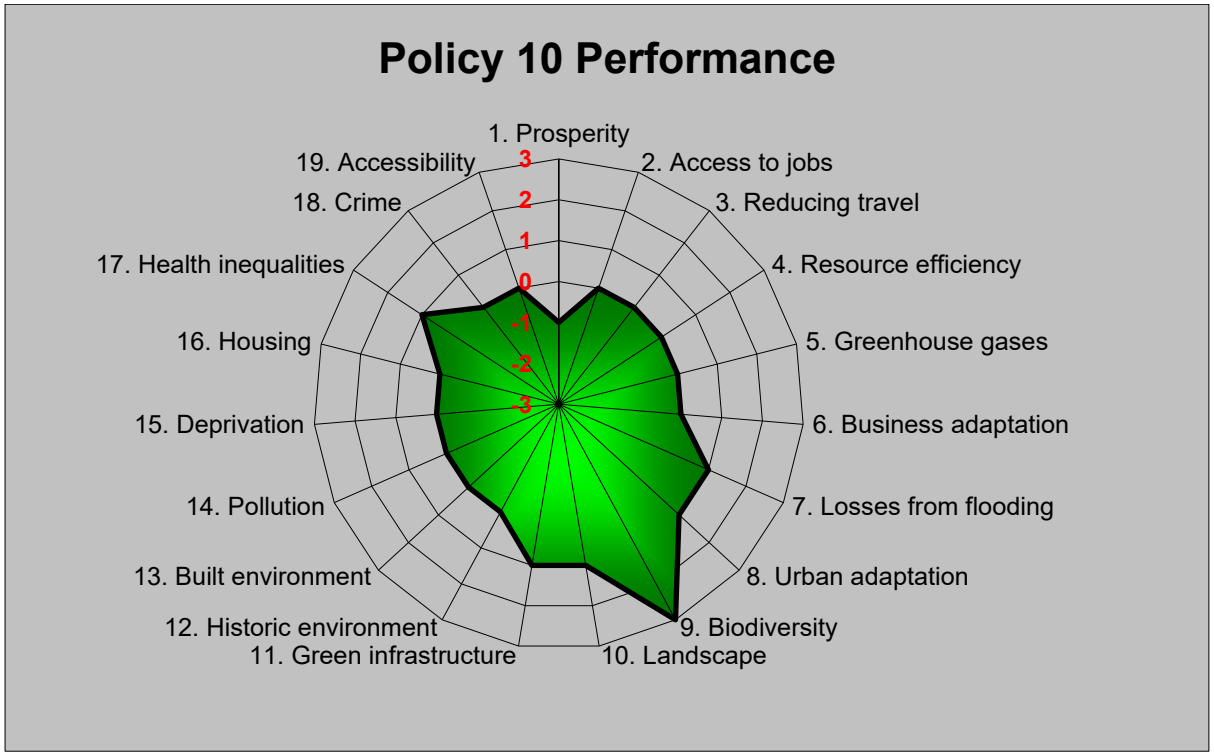
10.11.20 The policy sets measures to safeguard residential amenity, the natural environment, impacts on the historic environment, and avoid unacceptable visual impact and impact on highway safety from renewable and low carbon energy schemes. This should help minimise adverse effects of renewable and low carbon scheme and is likely to result in minor positive effects on several related sustainability objectives.

10.12 Appraisal of Policy 10: Natural Environment

Forecast Effects

10.12.1 This policy is likely to bring major positive effects with regards to biodiversity, and there are moderate benefits for landscape. A range of minor positive effects are also predicted in relation to indirect effects on health, pollution, flooding and green infrastructure (See Figure 10.12). These effects are mostly local in their geographical influence, but those in relation to biodiversity could be borough-wide if connections are made between habitats. All other objectives report neutral outcomes.

Figure 10.12. Sustainability Appraisal: Policy 10



SA Objective	Likely Significance	Rationale
9. Biodiversity	Maj +ve	Development affecting a SSSI must clearly outweigh the nature conservation value and national policy. Feasible mitigation measures are required. Development affecting local sites must clearly outweigh the nature conservation or geological value and incorporate measures to enhance or restore the links between sites where feasible to offset adverse effects on the site. In all cases there should be a net gain (10%) or enhancement potentially elsewhere within the biodiversity or green infrastructure network where feasible and appropriate. Overall the effect of the policy is anticipated to be positive in that it provides an opportunity to improve upon the situation without such a policy.

10. Landscape	Mod +ve	A landscape scale approach to the natural environment is called for with the protection, enhancement and restoration of landscape features so as to halt and where possible reverse the degradation of the Arden landscape and promote local distinctiveness. Developers are expected to protect, enhance and restore the landscape unless it is not feasible or necessary.

Local	7	*Unlikely*	0	*Direct*	5	*Positive*	6	Maj +ve	1
Borough	0	*Potential*	4	*Indirect*	2	*Negative*		Mod+ve	1
Regional	0	*Likely*	3	*Cumul*	0			Min+ve	4
National	0	*Definite*	0					Neutral	13
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

10.12.2 The policy sets out criteria for development proposals including requirements to consider, assess and address impacts on landscape and biodiversity. The policy involves specific measures to address landscape and biodiversity, whilst also making the connection between different elements of the natural environment.

10.12.3 In particular, requirements for developers to demonstrate 10% biodiversity gain is considered to have a major positive effect on the biodiversity objective, as it will require development proposals to calculate and deliver a net improvement in the ecological and biodiversity value sites. There is also a clear hierarchy in terms of making sure effects are avoided, mitigated and then enhanced.

10.12.4 As well as the direct effects upon biodiversity, there are also likely to be benefits with regards to linked objectives such as green infrastructure, pollution and adaptation to climate change. Ensuring links to green space / open space strategies should also help to ensure that communities can experience the benefits of wildlife and landscapes.

Uncertainty

10.12.5 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.

Influence of policy changes

10.12.6 A range of changes have been made to the policy since the version presented in the draft Local Plan. In particular, additional detail has been added in relation to biodiversity net gain and the way this ought to be achieved.

10.12.7 This is predicted to change the overall score for the biodiversity objective from moderate positive to major positive.

10.12.8 The policy has also been strengthened with regards to landscape character, which brings a moderate positive effect.

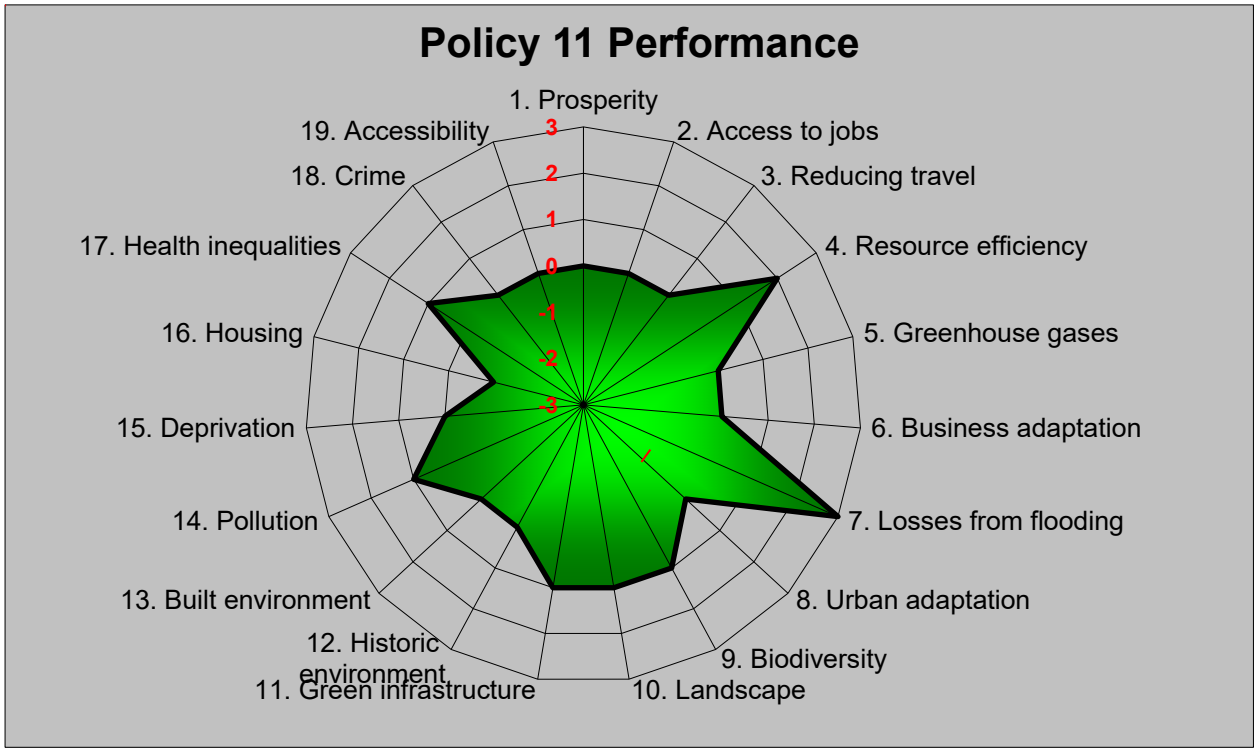
10.13 Appraisal of Policy 11: Water and Flood Risk Management

Forecast Effects

10.13.1 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.

10.13.2 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 10.13).

Figure 10.13. Sustainability Appraisal: Policy 11



SA Objective	Likely Significance	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. The policy further requires all development to include the use of sustainable urban drainage.

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

10.13.3 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.

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

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

10.13.6 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.

Uncertainty

10.13.7 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.

Influence of policy changes

10.13.8 The changes to the policy are positive in terms of flood risk, but this does not change the score (which was already a major positive). Requirements for all developments to include sustainable drainage systems should increase provision in particular in minor developments where non-sustainable drainage options may otherwise be considered. Requirements also for all development sites (and not just greenfield sites) to limit surface water discharge to the equivalent site-specific greenfield run off rate should further reduce run off rates and reduce flood risk (major positive).

10.13.9 Whilst these requirements are likely to reduce the developable capacity (and subsequent viability) of a site by requiring adequate space for water, the effects are predicted to be minor and do not change the overall significance of negative effects above minor negative for housing. Flexibility in the policy for development proposals where reducing run off rates to an equivalent greenfield site run off rate to demonstrate unfeasibility should further reduce the significance of negative effects of this policy requirement on the housing object.

10.13.10 The policy also requires contaminated land with potential infiltration to be consulted upon with the EA, which should help manage pollution events. (Whilst positive, this will still only result in a minor positive effect in terms of the pollution objective). Requirements to consult the EA if a proposal relates to an Area of Critical Drainage Problems should help minimise an increase in flood risk in vulnerable areas, but such requirements are pre-established in national planning policy and law and therefore this is not a significant deviation from the existing baseline.

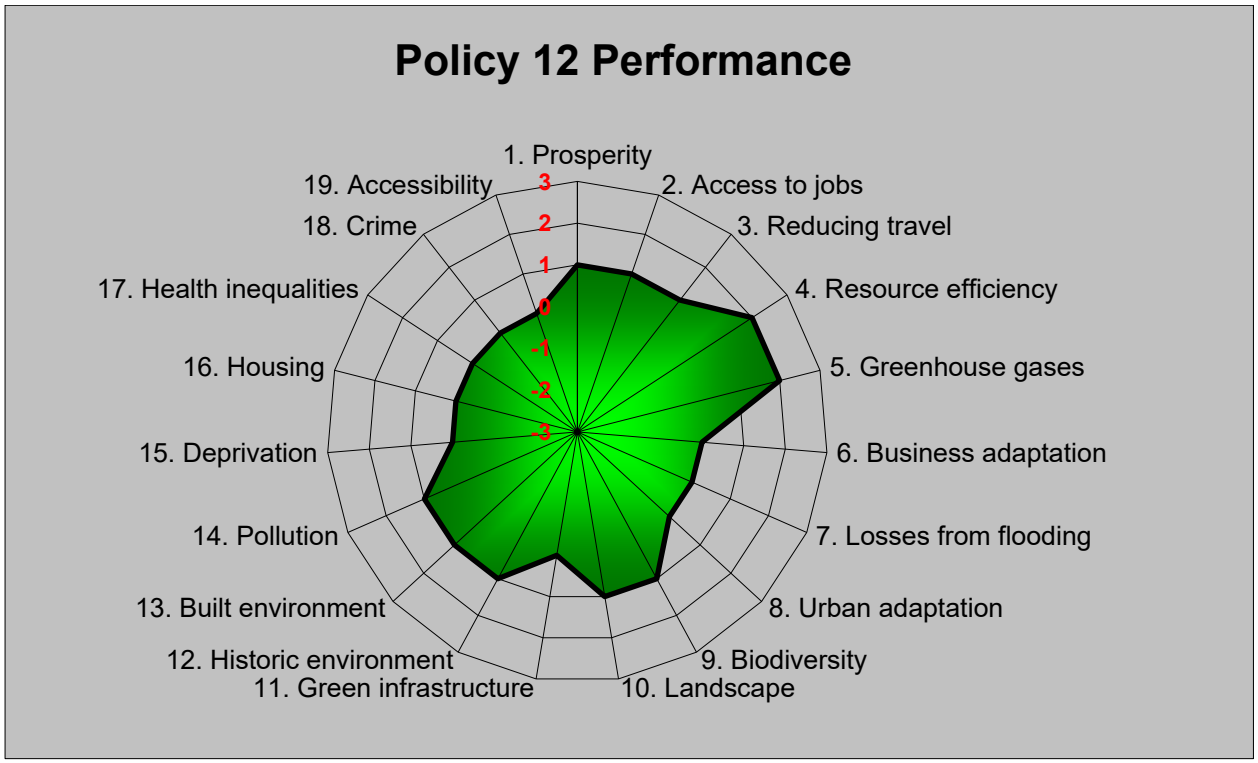
10.14 Appraisal of Policy 12: Resource Management

Forecast Effects

10.14.1 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 10.14).

10.14.2 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 10.14. Sustainability Appraisal: Policy 12



SA Objective	Likely Significance	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.

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

10.14.3 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).

10.14.4 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.

Uncertainty

10.14.5 Of the ten beneficial outcomes against the sustainability objectives that this policy delivers, seven are considered to have the potential to occur with three 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.

Influence of policy changes

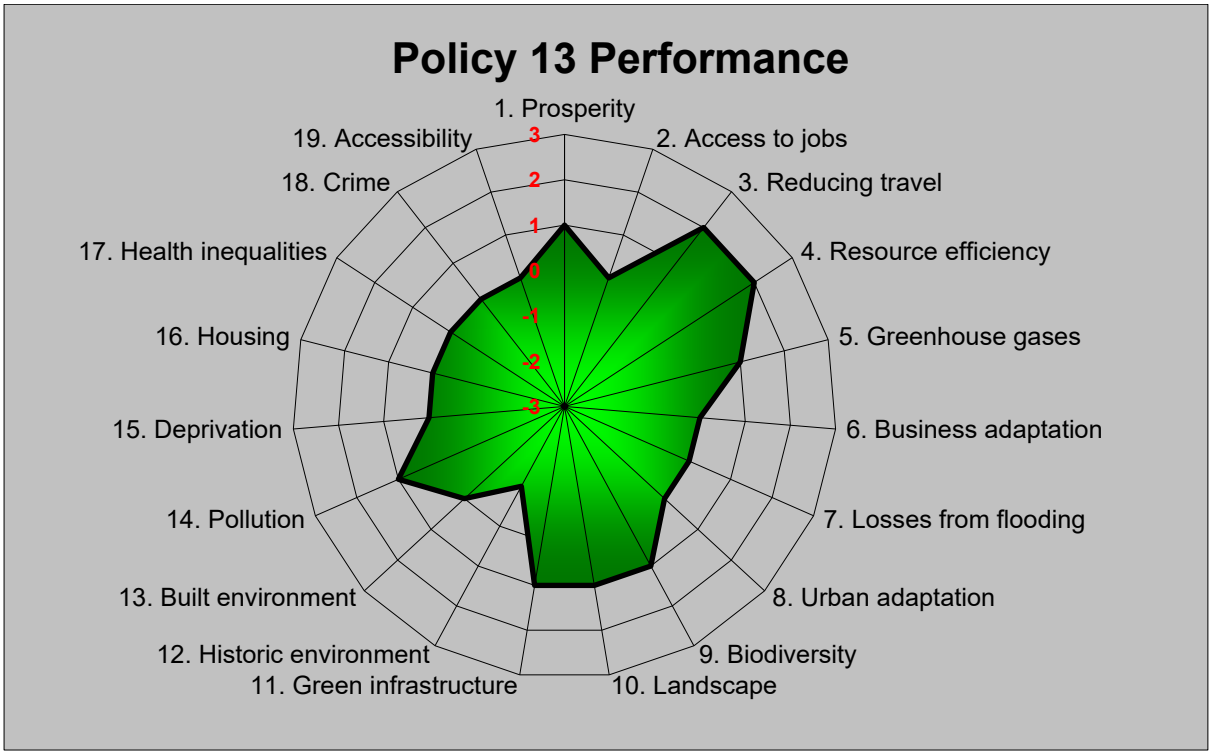
10.14.6 The changes to the policy are not material and do not change the significance of any effects against the sustainability objectives.

10.15 Appraisal of Policy 13: Minerals

Forecast Effects

10.15.1 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 10.15). 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 10.15. Sustainability Appraisal: Policy 13



SA Objective	Likely Significance	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

10.15.2 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.

10.15.3 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.

10.15.4 Minor benefits are predicted in relation to biodiversity and landscape in the long term as restoration and aftercare ought to present opportunities to secure enhancements. These effects may not take place in the plan period though, hence the minor significance.

10.15.5 No significant outcomes are anticipated against the sustainable communities theme.

Uncertainty

10.15.6 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.

Influence of policy changes

10.15.7 The policy identifies two sites for the extension of existing quarries for sand and gravel. Securing an adequate landbank to safeguard the supply of important minerals is predicted to have a minor positive effect on prosperity, reducing travel and resource efficiency objectives, as it would safeguard existing employment, minimise the need to import materials in the long term and protect important mineral resources from sterilisation. Whilst positive, the significance of these effects are not predicted to change the score.

10.15.8 Achieving this through extending existing quarry operations should minimise requirements for additional infrastructure and amenity issues above the existing baseline.

10.15.9 Extending existing quarry operations are also likely to have lower landscape and biodiversity impacts compared to establishing new operations on other sites. Whilst there is a local wildlife site adjacent to Berkswell Quarry, the policy stipulates that development would only be permitted if necessary mitigation and avoidance is in place. As a result the effects on biodiversity remain unchanged.

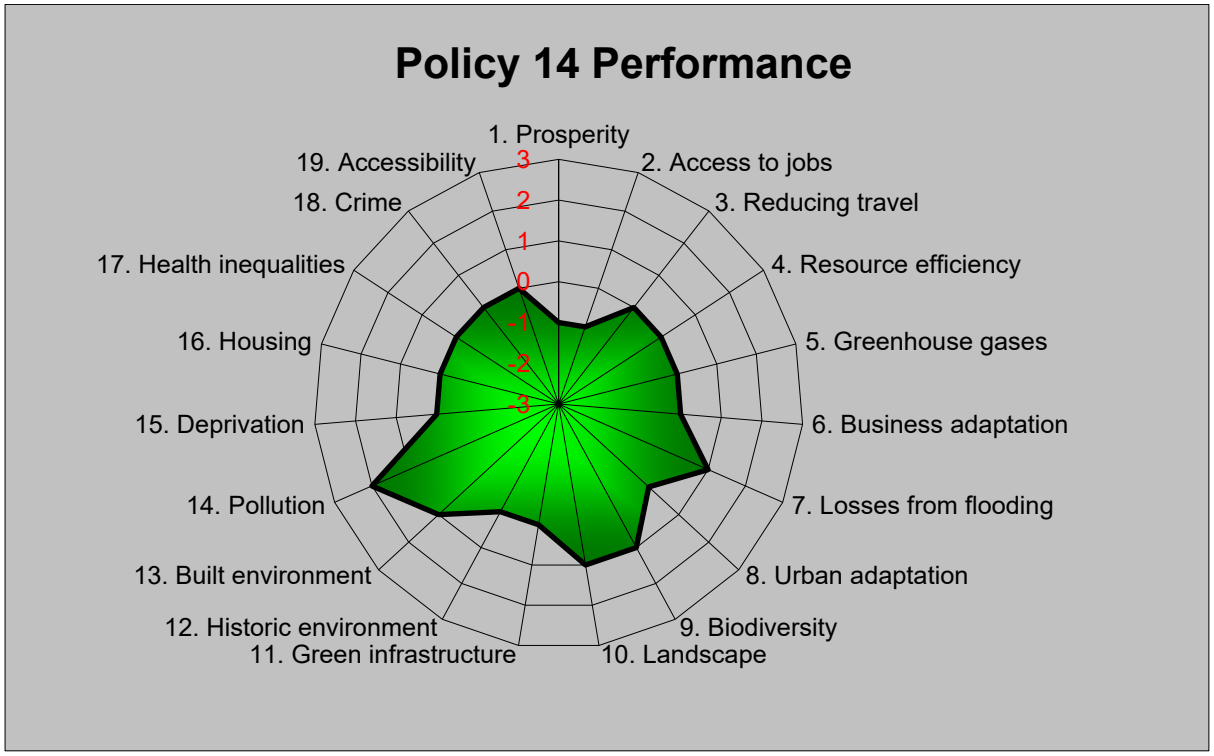
10.16 Appraisal of Policy 14: Amenity

Forecast Effects

10.16.1 This policy gives rise to one moderate positive outcome for pollution, along with six minor positive outcomes, and two minor negative outcomes (see Figure 10.17). 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.

10.16.2 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 10.16. Sustainability Appraisal: Policy 14



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

Local	7	*Unlikely*	0	*Direct*	3	*Positive*	6	Maj +ve	0
Borough	1	*Potential*	6	*Indirect*	5	*Negative*	2	Mod+ve	1
Regional	0	*Likely*	2	*Cumul*	0			Min+ve	4
National	0	*Definite*	0					Neutral	12
								Min-ve	2
								Mod-ve	0
								Maj -ve	0

10.16.3 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.

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

10.16.5 Across the six objectives within the natural resource protection & environment theme, the policy provides four potential minor beneficial outcomes (biodiversity, landscape, green infrastructure 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).

10.16.6 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.

Uncertainty

10.16.7 Of the 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 and the climate change and energy themes are considered to be indirect effects.

Influence of policy changes

10.16.8 The removal of policy text which explicitly supports broadband and telecommunications infrastructure means that previously minor positive effects on the deprivation and health inequalities objectives are now neutral . However, it should be noted that this text now forms part of Policy 21a,

10.16.9 Requirements for development proposals that result in significant air pollution that cannot incorporate adequate mitigation to offset such effects by funding alternative measures or initiatives elsewhere in the Borough should help safeguard the existing air quality baseline across the Borough. Although, this would be at a Borough-wide scale and a deterioration of air quality is still likely at a local-scale across the Borough. This is predicted to have a minor positive effect on the pollution objective, but the effects are not predicted to be significant enough to increase the overall significance of the policy on this objective above moderate positive.

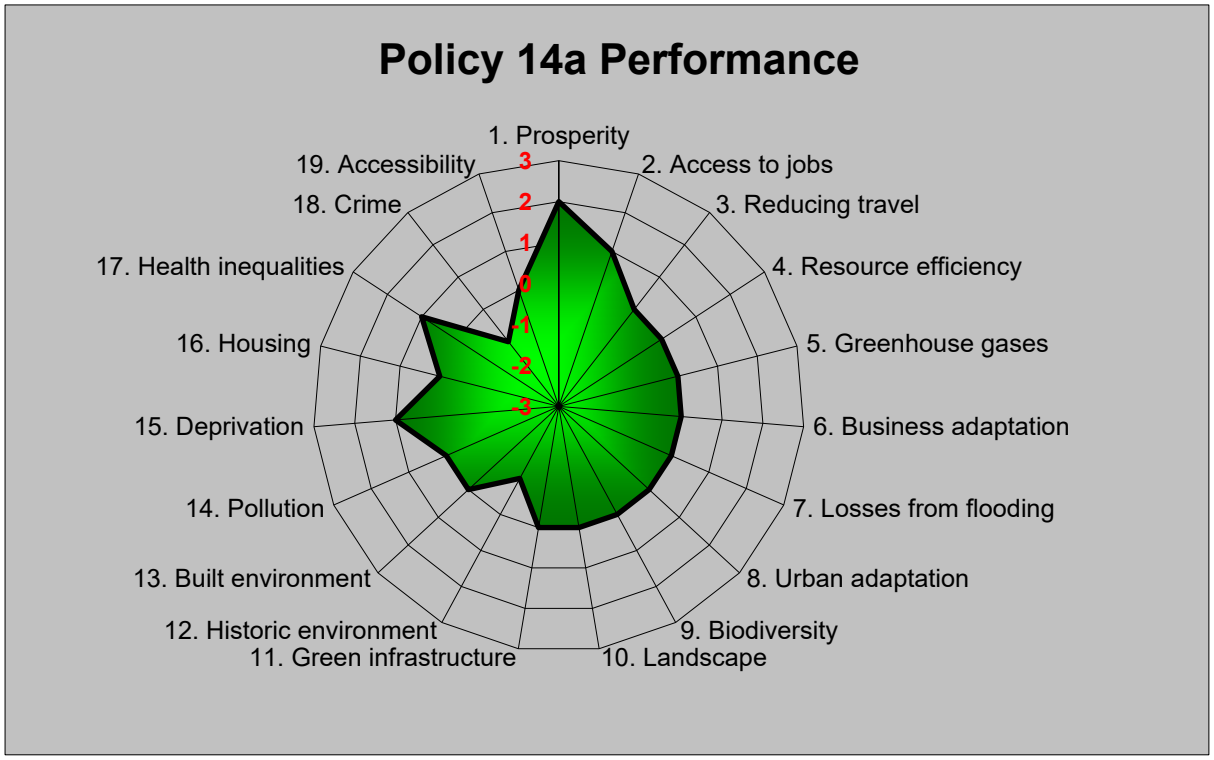
10.16.10 Changes in the policy to require proposals to assess and where possible limit or mitigate light spillage or the effects of light pollution on amenity reduces the likelihood of such effects occurring in a wider range of locations (whereas the previous policy iteration focused only on dark skies). This is an improvement to the policy, but predicted effects are still considered to be minor on the pollution objective.

10.17 Appraisal of Policy 14a: Digital Infrastructure and Telecomms

Forecast Effects

10.17.1 This policy has the potential to result in both positive and negative outcomes, although most outcomes are predicted to be neutral and a moderate positive effect is predicted for the prosperity objective.

Figure 10.171. Sustainability Appraisal: Policy 14a



SA Objective	Likely Significance	Rationale
1. Prosperity	Mod +ve	Support for improvements in high speed broadband and telecommunications infrastructure will support productivity and economic growth. This would also improve the desirability of the Borough for investment in related industries that require high speed broadband and communication provision, potentially facilitating employment growth.

Local	6	*Unlikely*	0	*Direct*	4	*Positive*	4	Maj +ve	0
Borough	1	*Potential*	6	*Indirect*	3	*Negative*	2	Mod+ve	1
Regional	0	*Likely*	1	*Cumul*	0			Min+ve	3
National	0	*Definite*	0					Neutral	13
								Min-ve	2
								Mod-ve	0
								Maj -ve	0

Uncertainty

10.17.2 The three minor positive and two minor negative effects have potential to occur, but this is subject to a number of factors. Potential minor negative effects on crime is highly subjective to the local receptiveness to new infrastructure delivery.

10.17.3 Similarly, potential minor negative effects on the historic environment objective is highly dependent on the nature of infrastructure proposals that may come about and their local context. Therefore, these effects are uncertain.

Influence of policy changes

10.17.4 Not applicable. This is a new policy introduced following issues and options stage.

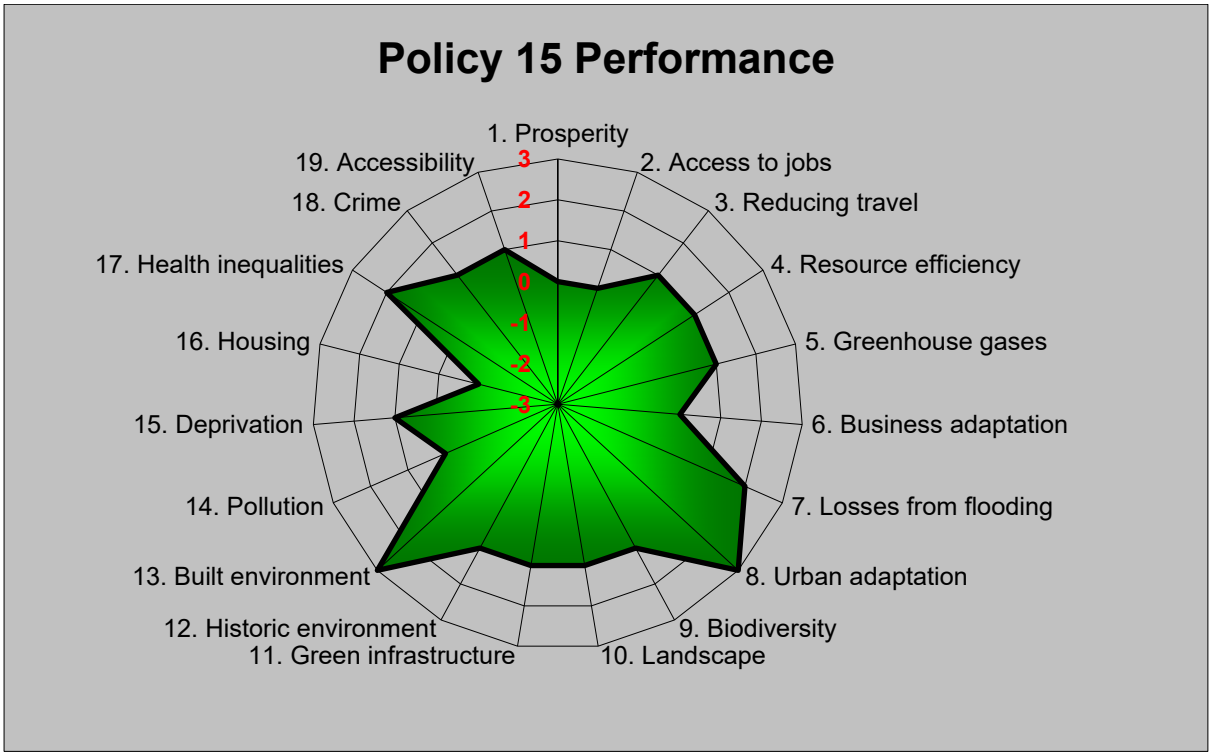
10.18 Appraisal of Policy 15: Securing Design Quality

Forecast Effects

10.18.1 The policy performs in a positive manner across fourteen of the nineteen sustainability objectives. As can be seen from Figure 10.17 there are two major beneficial outcomes, two moderate beneficial and ten minor positive outcomes.

10.18.2 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 10.18. Sustainability Appraisal: Policy 15



SA Objective	Likely Significance	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	Sets out the requirement for high quality 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.
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.

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

10.18.3 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).

10.18.4 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.

10.18.5 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.

10.18.6 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.

10.18.7 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.

10.18.8 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.

Uncertainty

10.18.9 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.

Influence of policy changes

10.18.10 Changes to ensure new developments include usable private outdoor space and public and private outdoor spaces is positive for health and wellbeing as it supports healthy and active lifestyles and recreation. The importance of outdoor space has become more evident during the Covid19 pandemic, and so these changes to the policy are likely to generate positive effects Despite being an improvement, the overall score for this policy remains a moderate positive effect in terms of health inequalities.

10.18.11 Expectations for development proposals to relate well to local typography and landscape features and to consider the protection and management of trees and to incorporate new tree planting is predicted to have a minor positive effect on the biodiversity and urban adaptation objectives.

10.18.12 Changes to the policy to require development proposals to comply with the most recent design guidance and standards is considered to sustain existing positive effects across several objectives.

10.18.13 Requiring developments to make efficient use of land through design measures should have a minor positive effect on the resource efficiency objective, as it seeks to encourage development proposals to use design to maximise development potential in a sustainable way. Whilst a positive change, this is not predicted to adjust the overall minor positive score for the resource efficiency objective.

10.18.14 The policy requires sunlight and energy efficiency to be considered as part of the layout of development through solar design and natural ventilation systems. This is a positive addition as it should encourage energy usage reduction in new development and improve thermal comfort. Minor positive effects are still predicted for the urban adaptation and greenhouse gasses SA Objectives.

10.18.15 Other design-based policy changes are predicted to have minor positive effects on the built environment, which contribute to the major positive effects that are recorded for this SA Objective.

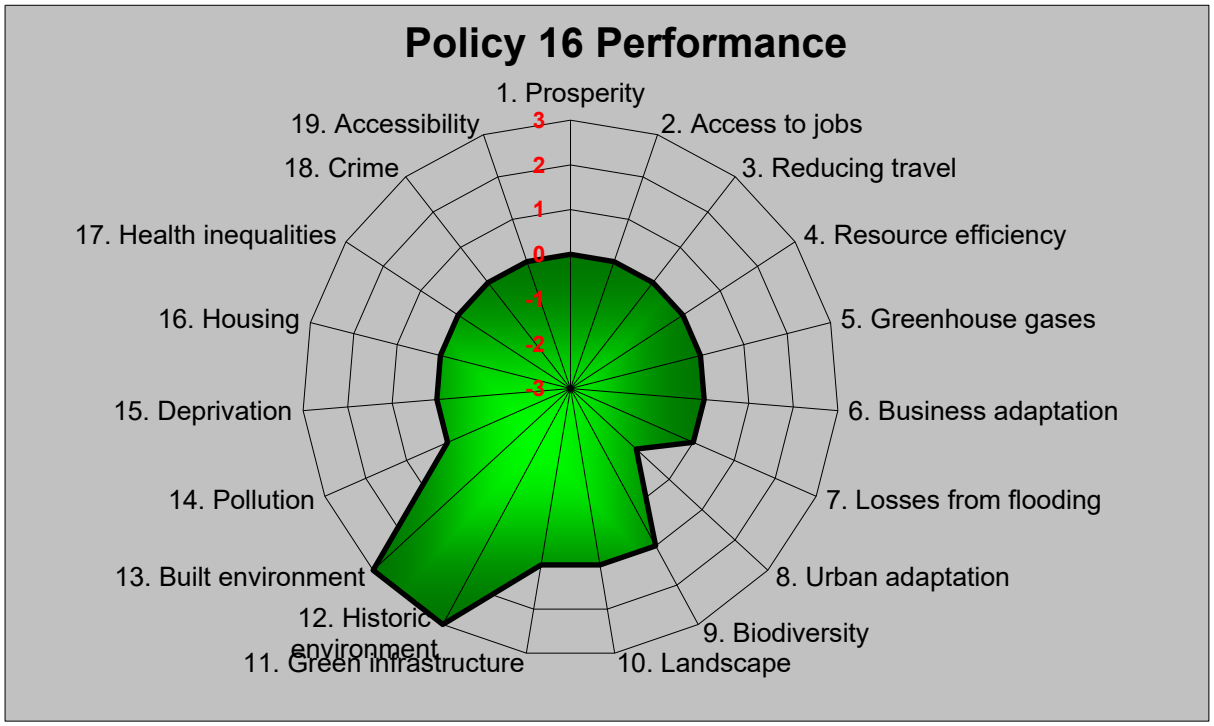
10.19 Appraisal of Policy 16: Conservation of Heritage Assets and Local Distinctiveness

Forecast Effects

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

10.19.2 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 10.18).

Figure 10.19. 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

10.19.3 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,

10.19.4 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.

10.19.5 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.

Uncertainty

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

Influence of policy changes

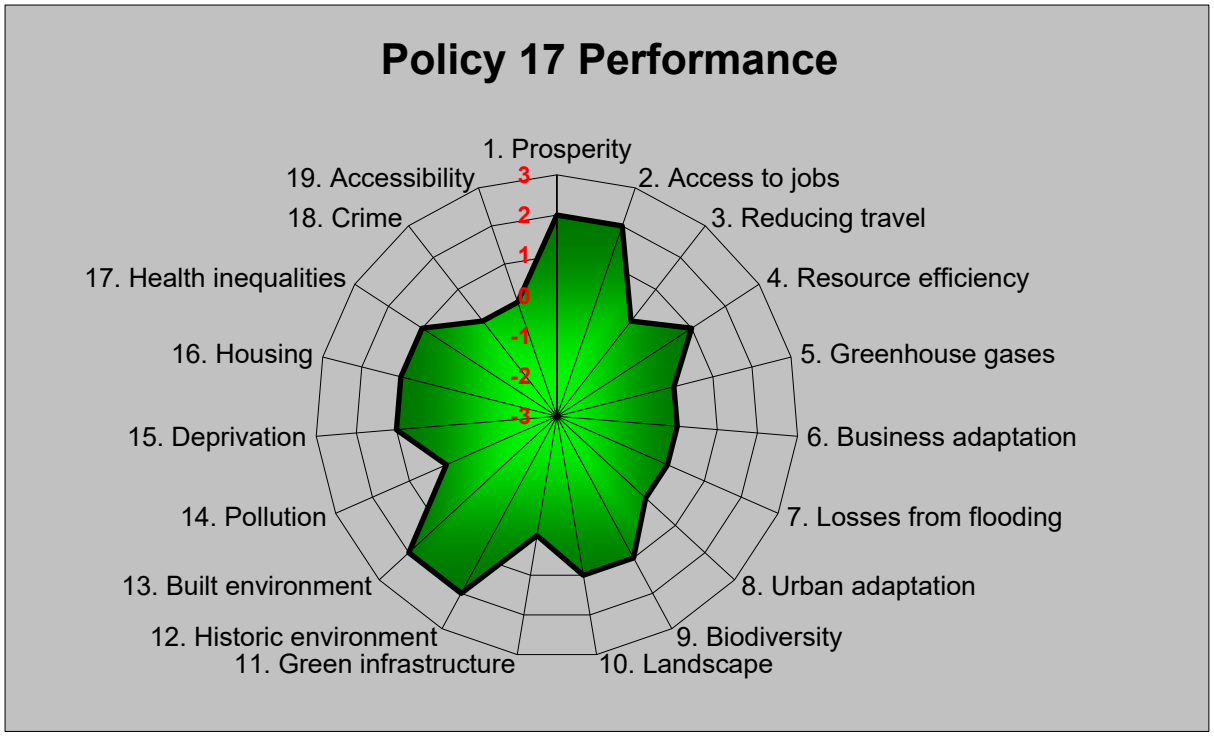
10.19.7 The Policy requires all applications that affect the historic environment to have considered and used as a minimum the evidence in conservation area appraisals and management plans in addition to the previous requirement for evidence in the Solihull Historic Environment Record. This is predicted to contribute to the major positive effect on the historic environment objective, as it increases the minimum pool of evidence that should be considered within a development proposal, thus ensuring a more detailed evidence base that development proposals should seek to abide to.

10.20 Appraisal of Policies 17 / 17a: Countryside and Greenbelt

Forecast Effects

10.20.1 The policies considered together are 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 10.19).

Figure 10.20. Sustainability Appraisal: Policy 17 / 17a



SA Objective	Likely Significance	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

10.20.2 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.

10.20.3 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).

10.20.4 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.

Uncertainty

10.20.5 Only one outcome from the policies 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.

10.20.6 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 policies would preclude large scale inward investment that would be new to the area unless within the remit of policy 1, the policies could be interpreted as allowing existing businesses located anywhere within the Borough to expand by new premises within the Green Belt.

Influence of policy changes

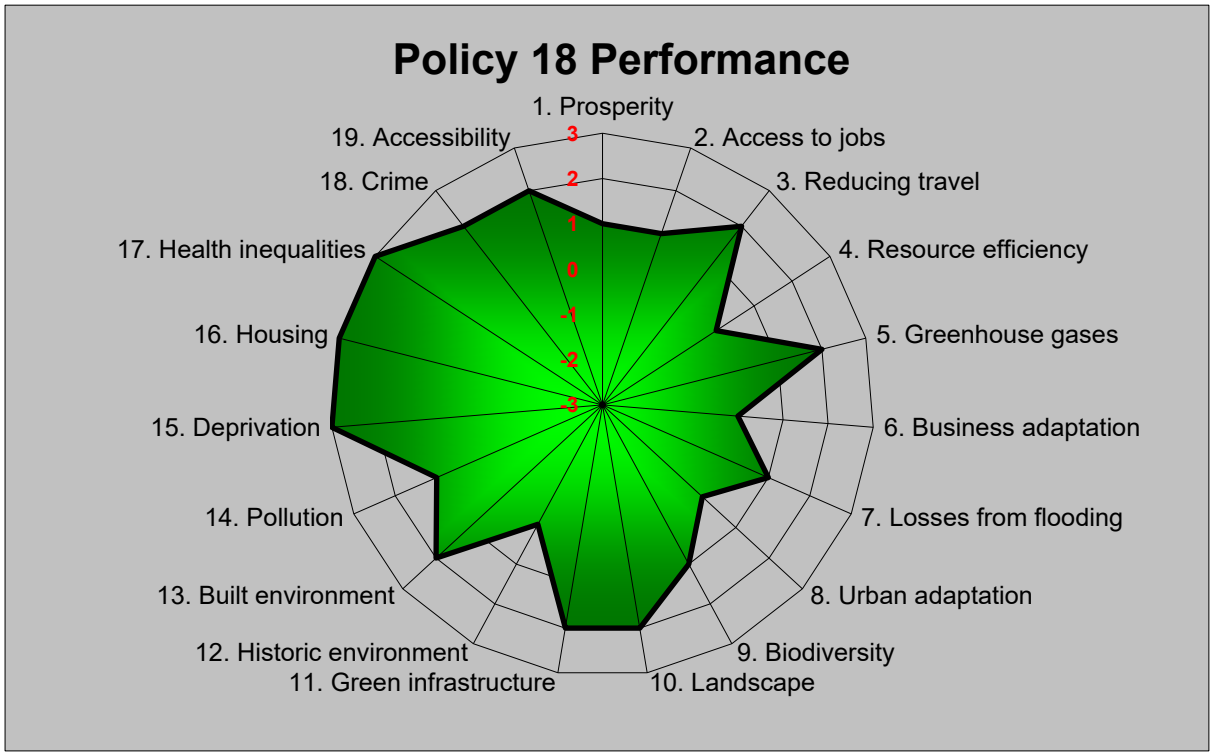
10.20.7 The policies clarify that sites removed from the Green Belt will need to provide appropriate compensatory improvements to environmental quality and/or accessibility. This is a positive inclusion, which is in accordance with requirements in the NPPF. The policies set a hierarchy on compensatory improvements which prioritises localised improvements. This is positive with regards to SA Objectives including health inequalities and green infrastructure, but does not alter the significance of effects.

10.21 Appraisal of Policy 18: Health and Well-Being

Forecast Effects

10.21.1 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 10.21. Sustainability Appraisal: Policy 18



SA Objective	Likely Significance	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.

SA Objective	Likely Significance	Rationale
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 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. Major 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.

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

10.21.2 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.

10.21.3 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.

10.21.4 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.

10.21.5 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.

10.21.6 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.

Uncertainty

10.21.7 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.

Influence of policy changes

10.21.8 The policy seeks to control the concentration of hot food takeaways in a given locality and sets out criteria to restrict the number of takeaway units including restricting units within 400m from a school or similar location. This is a positive addition which contributes to the major positive effects recorded against the health inequalities and deprivation objectives (by helping to address unhealthy eating, obesity and amenity).

10.21.9 Changes to the policy add detail relating to HIA. This includes a definition of major developments and incorporates a number of development types that require HIA screening and/or an assessment. Requiring HIAs for hot food takeaways should further help tackle issues in relation to obesity. Requirements for HIA screening for developments related to health and wellbeing and change of use for listed use types should ensure positive and negative impacts of development proposals on health are identified at the planning stage and appropriately addressed. This should be beneficial with regards to health inequalities and deprivation.

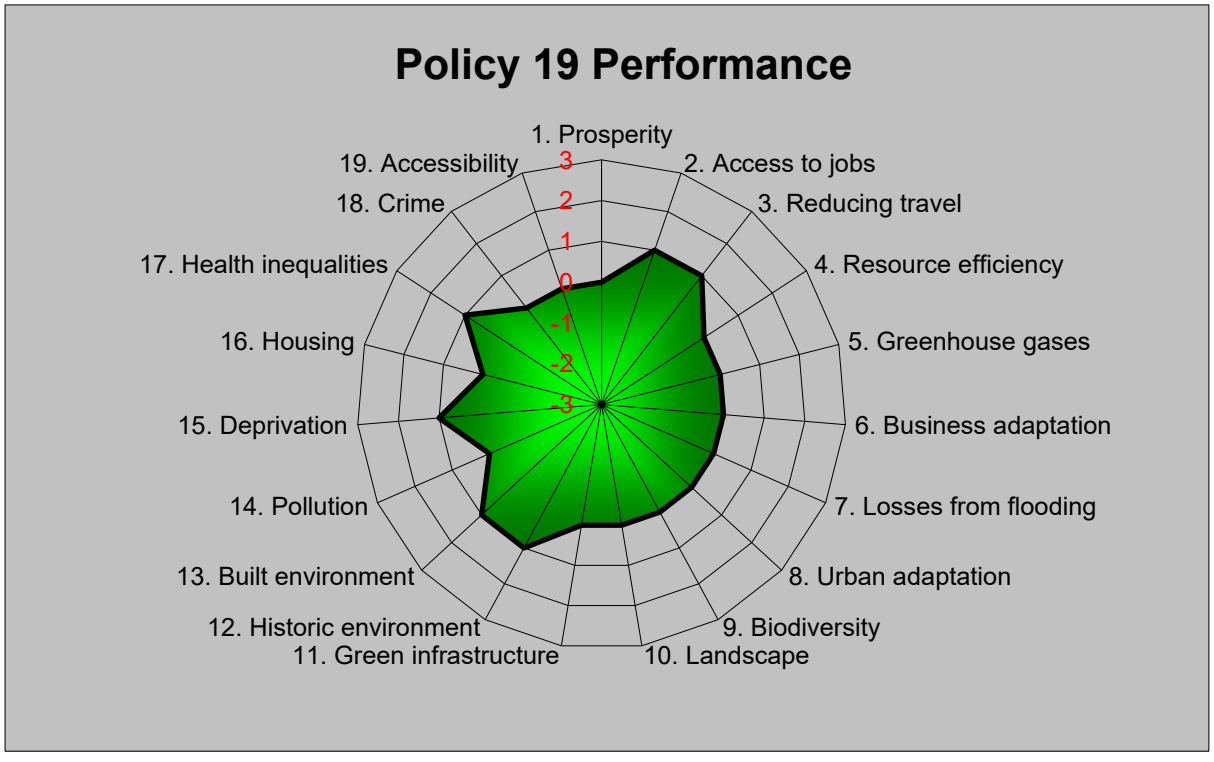
10.21.10 Requirements for HIAs and HIA screening to be undertaken in accordance with the Council's Health SPD should uphold the standard of assessments and the effectiveness of the policy to achieve positive outcomes on addressing health inequalities. The policy sets out that the council may require applicants to provide mitigation where a development has significant negative impacts on health and wellbeing.

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

Forecast Effects

10.22.1 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 10.22).

Figure 10.22. 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

10.22.2 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.

10.22.3 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.

10.22.4 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.

Uncertainty

10.22.5 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.

Influence of policy changes

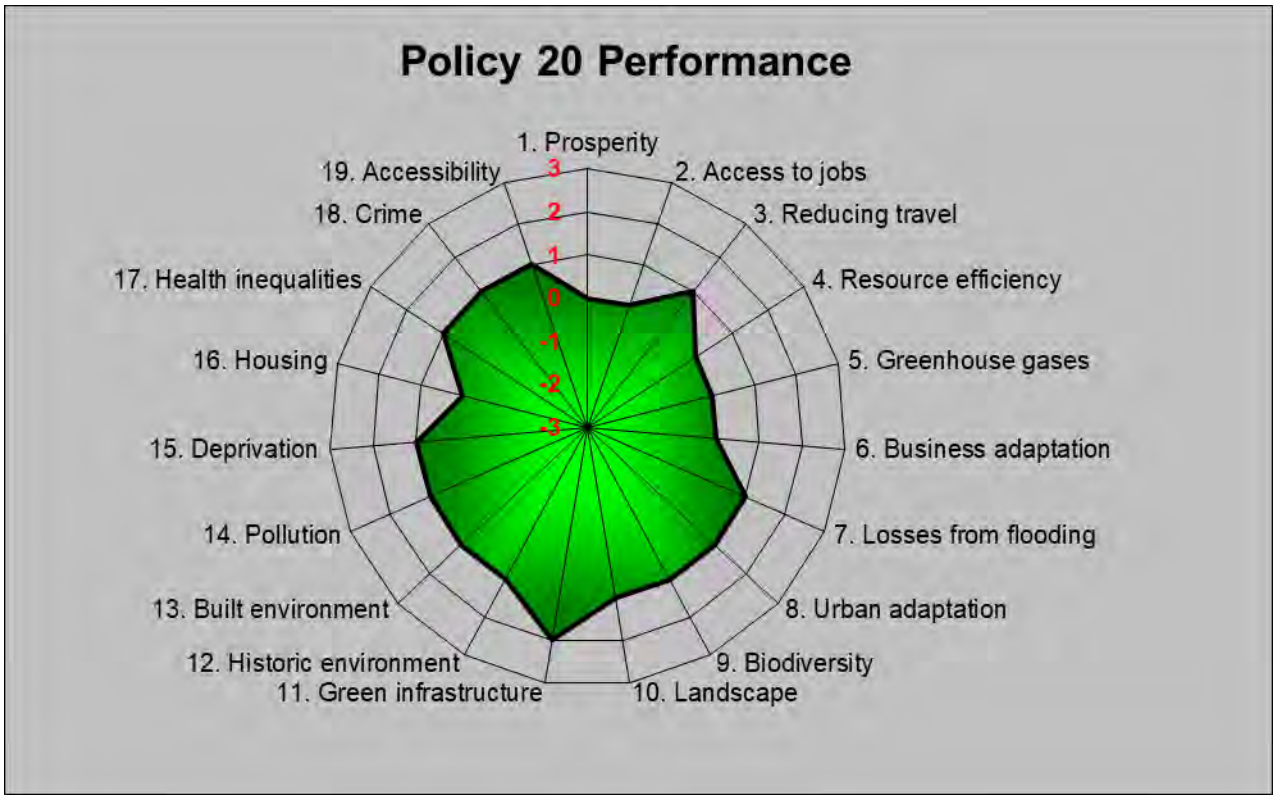
10.22.6 The changes to the policy are not materially different and do not change the significance of any effects against the sustainability objectives.

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

Forecast Effects

10.23.1 This policy gives rise to one moderate positive effects with a twelve minor beneficial effects. A total of six outcomes against the sustainability framework are neutral (see Figure 10.22). Twelve of the thirteen effects are considered to be of a local scale with six being an indirect consequence of the policy.

Figure 10.23. Sustainability Appraisal: Policy 20



SA Objective	Likely Significance	Rationale
11. Green Infrastructure	Mod +ve	This policy seeks to protect and enhance open spaces, which are an important element of the green infrastructure. The policy also looks to new major commercial development proposals to contribute to enhancement of the green infrastructure network. Requirements for alternative provision in cases where the existing provision of open space is not being protected to be as a minimum equivalent in terms of size, quality, accessibility, use, visual amenity, natural capital value, and supported by a management plan should safeguard open space provision including green infrastructure. The policy further protects green infrastructure and land of nature conservation value unless if it can be demonstrated that the land is not of wildlife value and does not contain elements of semi-natural habitats that act as a wildlife corridor or other feature of value to wildlife. Furthermore, if it does not fulfil a useful purpose in terms of appearance, landscape quality and recreational use.

Local	12	*Unlikely*	0	*Direct*	6	*Positive*	13	Maj +ve	0
Borough	1	*Potential*	4	*Indirect*	6	*Negative*	0	Mod+ve	1
Regional	0	*Likely*	7	*Cumul*	1			Min+ve	12
National	0	*Definite*	2					Neutral	6
								Min-ve	0
								Mod-ve	0
								Maj -ve	0

10.23.2 The policy generates a wide range of positive effects across the sustainability objectives, but these are mostly minor in nature. This includes the positive contribution that open space has in terms of flooding, mitigating the urban heat island effect, supporting biodiversity, contributing to healthy communities and protecting natural and built heritage.

10.23.3 More pronounced (moderate) effects are predicted in relation to green infrastructure, as this is likely to be maintained and enhanced as a result of the policy and the effects are of a more direct nature across a wider geographical area.

Uncertainty

10.23.4 Of the thirteen recorded beneficial effects four were regarded as having the potential to occur with nine being likely to occur or have a definite outcome.

Influence of policy changes

10.23.5 Changes to the policy include a requirement for alternative provision in cases where the existing provision is not being protected to be as a minimum equivalent in terms of size, quality, accessibility, use, visual amenity, natural capital value, and supported by a management plan.

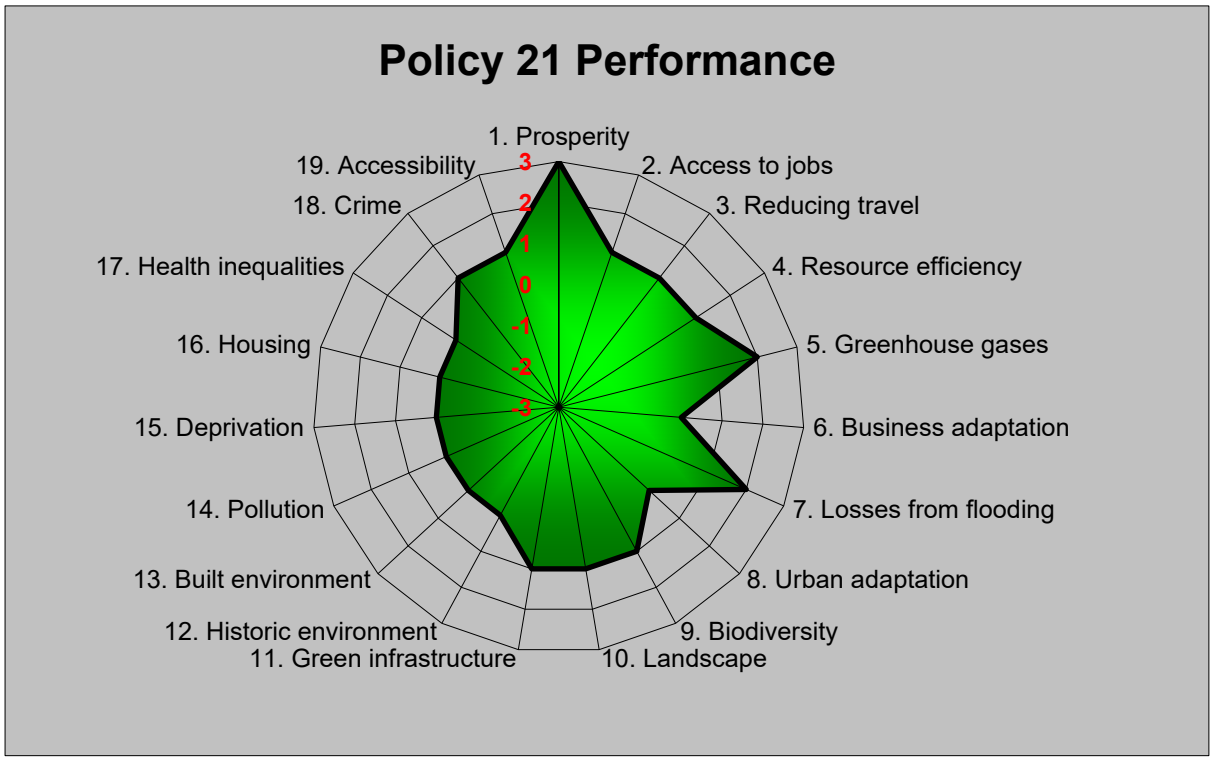
10.23.6 The changes bring greater clarity and ought to make positive effects more likely to occur. However, the significance of effects is unlikely to be affected.

10.24 Appraisal of Policy 21: Developer Contributions and Infrastructure Provision

Forecast Effects

10.24.1 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 10.24. Sustainability Appraisal: Policy 21



SA Objective	Likely Significance	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

Uncertainty

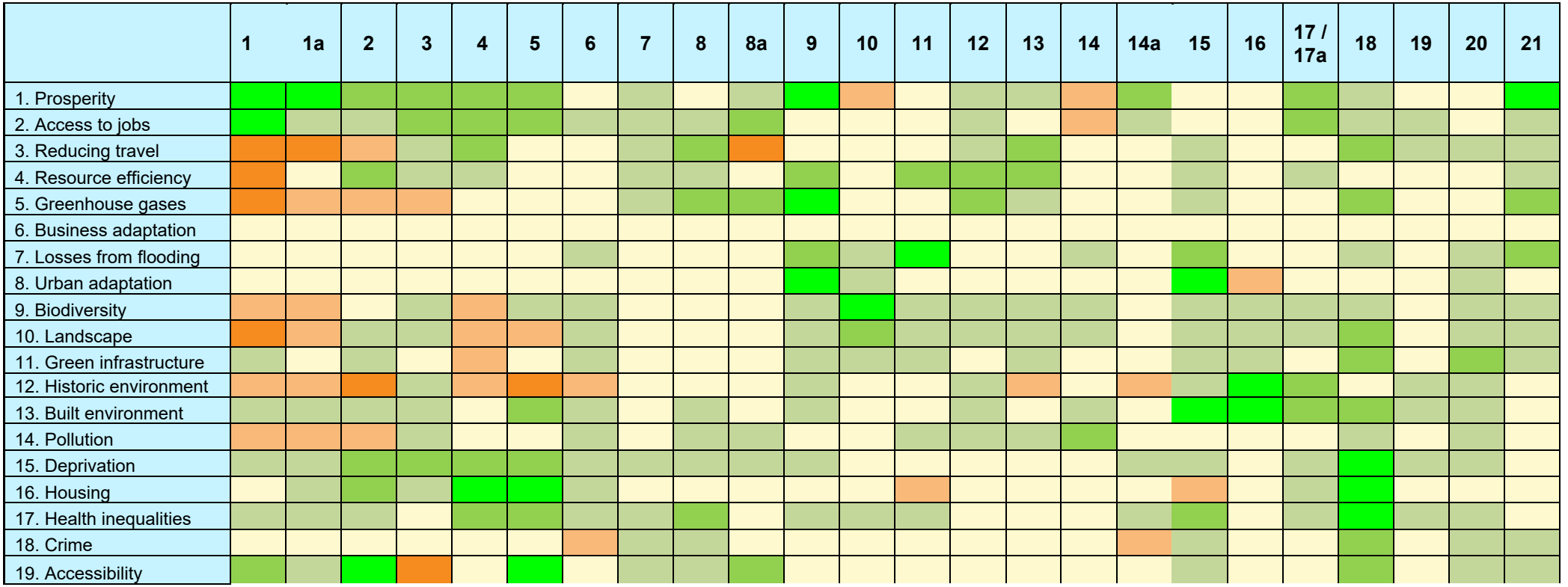
10.24.2 Most of the predicted effects have an element of uncertainty, as the outcomes will depend upon the exact details of contributions and infrastructure delivered through different developments.

Influence of policy changes

10.24.3 There is a minor change to the policy through the removal of a clause that restrict contributions being pooled when 5 or more contributions are sought for the same infrastructure. These changes are not predicted to change the significance of any effects against the sustainability objectives.

11. Cumulative effects and conclusions

11.1.1 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.



11.2 Sustainable Consumption and Production

11.2.1 The Plan is predicted to have **major positive effects** with regards to prosperity, with policies 1, 1a, 9 and 21 in particular bringing significant benefits in relation to the creation of employment and investment; which could benefit deprived communities. A range of plan policies are predicted to have positive effects, and in combination, the significance of these in terms of regeneration and access to employment ought to be major. The plan also places the majority of new homes in locations that should have good access to employment and education. Only policies 10 and 14 (which seek to promote environmental protection and secure amenity) give rise to minor negative effects as the policy requirements could possibly hamper development in certain locations.

11.2.2 With regards to travel and infrastructure, the Plan could generate some negative effects by placing growth in locations that will likely lead to increased car usage on busy networks. However, new infrastructure could possibly be supported and there are a range of plan policies seeking to encourage public transport usage, and increased walking and cycling. Overall, mixed effects are predicted. On one hand, increased car usage in areas of substantial growth are proposed. This could put pressure on infrastructure. However, the scale of development would support enhancements, and the pattern of growth should also help to reduce the length of trips and support modal shift. Therefore, both **minor positive effects** and **minor negative effects** are predicted

11.2.3 With regards to resource efficiency, the Plan will lead to an increase in the use of natural resources and the generation of wastes (during construction and operation). Though previously developed land forms a part of the strategy, there will be a loss of greenspace. However, there are a range of policies that seek to minimise such effects and in combination ought to ensure that the effects overall are **neutral**.

11.3 Climate change and energy

11.3.1 With regards to greenhouse gas emissions, several policies associated with the strategic approach to growth could lead to an increase in emissions. In particular this includes the economic growth policies. In combination, a moderate negative effect in terms of emissions is generated. However, other plan policies counterbalance these effects by seeking to reduce transport based emissions. Policy 9 in particular should also help to ensure that new buildings are of a much higher environmental performance, which could speed up the move towards carbon neutrality. As a result, the overall effect of the Plan with regards to greenhouse gas emissions is predicted to be a **minor positive effect**.

11.3.2 There is little in the plan that would directly affect the resilience of businesses to climate change specifically. As a result, **neutral effects** are likely.

11.3.3 With regards to flooding, the strategy broadly avoids areas at risk of flooding, and includes numerous policies that seek to support green infrastructure and flood management. As a result, a minor positive effect is predicted.

11.3.4 A similar picture exists for climate change adaptation, with policies 9 and 15 in particular possibly bringing about **major positive effects** in relation to the design of new development (which needs to demonstrate measures that will adapt new developments to climate change).

11.4 Natural resource protection and environmental enhancement

11.4.1 The majority of plan policies bring about minor positive effects with regards to biodiversity, as there is a focus throughout on the protection and enhancement of the natural environment. The requirement to deliver net gain in particular is likely to bring about a **major positive effect** in the longer term, especially when it is considered alongside all other plan policies. However, whilst new development could present opportunities for net gain, it is important to recognise that some **minor negative effects** could occur during the short term, due to disturbance from construction, increased urbanisation and recreation.

11.4.2 The Plan takes a positive approach to landscape protection through its supporting policies. This creates a range of minor positive effects. However, there will be unavoidable impacts upon landscape character in several locations across the district. Mitigation measures ought to ensure that significant effects can be avoided, especially given the strategic scale of sites and the potential to implement buffer zones. Overall though, **minor to moderate negative effects** remain in terms of landscape.

11.4.3 In terms of green infrastructure, there will be a substantial loss of greenfield land, which constitutes negative effects on the GI network. However, a range of plan policies seek to protect and enhance the GI network, and this is perhaps more easily achieved through opportunities offered from new development. As a result, a **neutral effect i**s predicted overall.

11.4.4 The historic environment is likely to be affected by the Plan, with moderate negative effects predicted in relation to the housing and employment strategy. This is due to the large scale development proposed in locations where the setting of heritage assets and the character of settlements could be altered. Whilst the plan seeks to minimise such effects through other policies, **minor to moderate negative effects** on the historic environment remain. Conversely, the Plan offers the potential to improve townscapes in areas that are in need of regeneration and in gateway locations. These are **minor positive effects.**

11.4.5 Though new development could have some polluting activities, the Plan contains the necessary policies to ensure that pollution can be avoided and minimised. As a result, a **neutral effect** is predicted overall.

11.5 Sustainable Communities

11.5.1 By seeking to meet identified housing needs for the borough and a proportion of unmet needs from Birmingham; the Plan is predicted to have **major positive effects** with regards to housing, regeneration and health inequalities.

11.5.2 The location of growth is broadly sustainable in terms of access to jobs and services, and the strategy ought to help continue regeneration efforts in North Solihull. Supporting policies which provide details on the types of housing to be sought, supporting infrastructure, community facilities and high quality design should also ensure that health inequalities are addressed over the longer term and improvements to the public realm are secured.

11.5.3 There are very few effects predicted in terms of crime, with some minor positive and negatives for particular policies. The overall picture in terms of the Plan are **neutral.**

11.5.4 In terms of accessibility, and ensuring a strong link between jobs, houses and social infrastructure, the strategy places development in locations that could support sustainable travel and shorter trips.

12. Monitoring

12.1.1 There is a requirement to outline the measures envisaged to monitor the predicted effects of the Plan. In particular, there is a need to focus on the significant effects that are identified. It is important to track predicted effects to ensure that positive effects are actually realised and to identify any unforeseen negative effects that may occur.

12.1.2 Table 12.1 below sets out monitoring measures under each SA topic which are intended to be used to monitor any significant effects and to track the baseline position more generally. At this stage the monitoring measures have not been finalised, as there is a need to confirm the feasibility of collecting information for the proposed measures. Wherever possible, measures have been drawn from the Local Plan monitoring framework to reduce duplication.

12.1.3 The monitoring measures will be finalised once the Plan is adopted, and will be set out in an SA Statement in accordance with the SEA Regulations.

Table 12.1 *Monitoring the effects of the Plan*

SA Topics	Proposed Monitoring Measures
Prosperity **Major Positive Effects** are predicted due to employment growth in strategic locations that could benefit a range of communities.	Quantum and Type of floorspace developed Extent to which development is linked to local employment needs
Climate Change Adaptation **Major Positive Effects** are predicted in relation to new development being designed to high standards	No. of new homes that are built to Future Homes Standard (from 2021) and zero carbon (from 2026). % of new homes with net reduction of surface water run off
Biodiversity **Major positive effects** are predicted in relation to the requirement for net gain.	No. of new trees planted per year under WMCA scheme. Amount of accessible natural green space created/enhanced each year. % of developments achieving 10% (or more) net gain in biodiversity in accordance with policy P10. Total % net gain achieved through new development.

SA Topics	Proposed Monitoring Measures
Landscape Potential **moderate negative effects** could occur in relation to large scale development on the urban fringes.	Loss of land (ha) classified as medium – high in terms of landscape sensitivity. Loss of Green Belt to Development. Development outside of defined settlements on non-allocated sites.
Historic environment Potential **moderate negative effects** could occur as a result of large scale development affecting the setting and character of heritage assets and settlements	Number/proportion of heritage assets at risk (Grade I, II* and II Listed Buildings, Scheduled Ancient Monuments, Registered Parks and Gardens and Conservation Areas). Number/proportion of Conservation Areas with up-to-date Conservation Area Appraisals and Management Plans.
Regeneration **Major positive effects** are predicted to reflect opportunities to continue regeneration in North Solihull.	Change in Index of Multiple Deprivation. Employment rate and trends between most and least deprived LSOAs. % of benefit claimants by LSOA.
Housing **Major positive effects** are predicted as the required amount, types and locations of housing ought to be delivered through the Plan.	Number of affordable dwellings delivered through the planning system. Mix of market housing reflecting the likely profile of household types requiring market housing as evidenced by the HEDNA Dwellings completed per annum as a proportion of the Plan target.
Heath inequalities **Major positive effects** are predicted as the Plan seeks to achieve improvements to social infrastructure, green space and through new jobs and homes.	New and improved open space, sport, recreation and children's play facilities. Contributions made towards healthcare and education. Number/proportion of developments achieving at least 10 out of 12 'green lights' measured against Building for Life 12 Standard.

13. Mitigation and enhancement

13.1.1 Mitigation and enhancement measures have been considered throughout the SA process. In particular, this has involved:

- Acknowledgement of how the effects for each spatial option could be mitigated and potential for enhancements.
- Initial recommendations for mitigation and enhancement were made to help inform the development of plan policies (see table 13.1 below). Some of these factors were addressed as the Plan progressed, whilst others were considered unnecessary or became less relevant in a changing context.
- Further recommendations made at the most recent stage of appraisal (Reg19).

Table 13.1: Mitigation and enhancement measures (Issues and Options Stage)

Recommendations
Policy 1: Support Economic Success
Extend the need for high standards of design across the UK Central. Link timing/scale of development with delivery of new transport infrastructure/services. Explore implications of residential and commuter based travel associated with existing and future development east of the M42 Confirm adequacy of forthcoming SPDs on Managing Demand for Travel and on Accessibility. Require preparation, implementation and monitoring of travel plans. Link with policies P7 & P8. Requirement major development proposals to demonstrate how they could make provision to link into future heat or energy networks when viable. Avoid sterilisation of sites or the creation of future barriers to delivery for distributed heat and energy networks. Provide the policy underpinnings for distributed heat and energy networks. Extend the general requirement to protect and enhance the natural environment, beyond the two existing business parks to across UK Central. Promote the use of green roofs and green walls. Require exploration of design opportunities to enhance ecological connectivity, habitats and conserve soils. Adopt an urban fringe landscape design strategy.

Require demonstration of measures taken to improve accessibility to employment from areas with persistent unemployment.

Ensure designs are not just for the young professional groups, but also for the elderly and those with disability including that of dementia.

Require provision of child care facilities within the major employment hubs.

Require 20 mph zones and a physical form that promotes physical fitness.

Require provision of fresh food outlets within new developments.

Require creation and protection of quiet areas in major housing development areas.

Require consideration of effects of major development on health and social care provision.

Proposals for new developments to include appropriate open and shared infrastructure (wired and wireless) to provide high speed ubiquitous internet access providing for future flexibility as far as is viable.

Promote Hub a smart community providing exemplar applications of digital services.

Policy 3: Provision of land for general business and premises

Prioritise development in areas where low carbon outcomes and delivery of local heat or energy networks can be enhanced.

Encourage major employers to demonstrate how they intend to support local small and medium sized companies; particularly those located within disadvantaged communities.

Policy 4: Meeting housing needs

Make Category 2 the default standard for all new homes, and also require a higher proportion are built to Category 3 standard.

Policy 5: Provision of land for housing

Encourage provision of public transport infrastructure and education provision with the phasing of the release of housing sites. Enable communities without access to a car across the Borough to access education and employment.

Monitor effect of reduced housing provision at North Solihull. Avoid increasing deprivation and health inequalities.

Policy 8: Managing Demand for Travel and Reducing Congestion

Require developments ‘to promote’ transport efficiency and highway safety.

Consider work place charging across UK Central.

Require developments to not normally adversely affect walking and cycling access or exacerbate motor vehicle dependence

Promote a design strategy that reverses the dominance of private car within development masterplans.

Promote reduced parking tariffs for low emission vehicles or car pool vehicles.

Policy 9: Climate change

Require developers to explore future proofing for distributed networks. The Council ought to develop sufficient evidence to allow identification of key sites for distributed heat and energy networks in line with the NPPF.

Require future provision for emerging LEV infrastructure and charging points. Encourage charging plug-in and other ultra-low emission vehicles in line with NPPF.

Policy 15: Securing design quality

Include reference to both the internal and external settings making provision for an elderly population.

Require new development to create areas of tranquillity across Hub.

Prepare Supplementary Planning Documents for areas where quality design is necessary to protect qualities of the Borough.

Policy 18: Health and Wellbeing

The Director for Public Health recommended that future development is informed by an assessment of health impact.

Further recommendations (Reg19)

- **Policy 5 Housing land:** A detailed strategy for delivering green infrastructure networks on strategic housing sites would be beneficial, and help to mitigate potential negative effects in terms of natural greenspace.
- **Policy 9: Climate Change:** By identifying specific opportunity areas for renewable energy (particularly wind), there would be more certain that a significant shift towards carbon neutrality.
- **Policy 10 Natural Environment:** Develop a supporting strategy that identifies habitat opportunity areas to allow off-site net gain to be achieved where appropriate.

14. Next Steps

14.1.1 This document is a Sustainability Appraisal Report that accompanies the latest stage of work in relation to the Solihull Draft Local Plan Review 2020.

14.1.2 The SA Report draws together previous SA work (i.e. interim SA Reports) as necessary, as well as re-considering reasonable alternatives for the spatial strategy, updating policy appraisals, and establishing potential monitoring measures.

14.1.3 The most recent timetable moving towards Adoption of the Local Plan is set out in Table 11.1 below.

Table 11.1: Timetable

Date	Milestone
Current Stage (Autumn 2020)	Publication of Submission Draft
Winter/Spring 2020-2021	Submission to the Secretary of State
Summer/Autumn 2021	Examination of the Plan
Winter 2021	Adoption of the Local Plan Review

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

Appendix A: SA Scoping Report

Separate document prepared

Appendix B: Comments received on Scoping Report

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

Representation	Council response
Natural England	
• The baseline information is generally sufficient.	Noted.
• 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.	Noted.
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.	The site appraisal framework makes distinctions between the hierarchy of international, national or locally designated sites.
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 "*Ensure current ecological networks are not compromised, and future improvements in habitat connectivity are not prejudiced*"	Noted. SA Framework amended accordingly.
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.	Noted.
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.	Agreed. Suggested indicators will be borne in mind.

Representation	Council response
Turleys 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. 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. 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. 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. 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. 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. 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: • 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.	Support noted. No changes deemed necessary. Objective SA1 already covers the importance of the HS2 and its contribution to regeneration.
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.	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.

Representation	Council response
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.

Representation	Council response
The Highways Agency We believe that SMBC could consider the following policies and guidance relating to transport within the draft SASR: • 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	Noted. Documents included as part of the policy review.
Summix FHS Developments LLP <u>Contextual review</u> The following documents should be considered: *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* *The Planning Inspectorate - Local Development Frameworks: Examining Development Plan Documents – Learning form Experience, September 2009* *Local Development Frameworks: Examining Development Plan Documents – Soundness Guidance, Planning Inspectorate, August 2009 and update February 2010* *Principles of Plan Making, Chapter 6 The Role of Sustainability Appraisal, PAS April 2013.* <u>The process of scoping is described incorrectly</u> <u>Evidence documents and baseline information</u> 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. Baseline data is out of date. <u>Sustainability issues</u> The sustainability issues that concern the Plan have not been clearly identified. <u>The SA Framework</u>	<u>Contextual review</u> 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. 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. <u>The process of scoping is described incorrectly</u> There is no requirement to prepare a scoping report. Our interpretation of the requirements is in line with the SEA Regulations. <u>Evidence documents</u> 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. The issue of Green Belt will be taken into account in the SA. <u>Sustainability issues</u> The SA Framework includes a list of key issues for each sustainability objective. This clearly shows how each was derived. The framework sets out objectives and supporting questions. Indicators and targets do not have to be identified at this

Representation	Council response
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 Objective of	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 17 - The objective focuses on old people as this is a key issue identified

Representation	Council response
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. <u>Methodology</u> There is no methodology set out in the report. <u>Site appraisal</u> The site appraisal methodology is fundamentally flawed	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. <u>Methodology</u> 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. <u>Site appraisal</u> 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 C: Appraisal of alternatives for housing growth and distribution (draft Plan)

This appendix presents a detailed appraisal of the twelve reasonable alternatives for housing growth and distribution that were developed in support of the draft Local Plan.

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	✓✓✖	✓✓✖	✓✓✓✖

To contribute to economic development initiatives that benefit regeneration and the Borough's communities; especially those identified as deprived.

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).

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.

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.

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.

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.

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	*a. Meet needs*	?	?	?	?	?
	b. Needs+	?	n/a	?	?	?
	c. Needs ++	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 ditches[1]. 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.

[1] 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	?	?	?

To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.

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).

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.

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, Dorridge, Knowle, Meridien 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 b 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 as 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 c2000 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	✓✓✓	✓✓✖	✓✓✓✖

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*	✓?	✓?	✓✗	?	✓
	b. Needs+	✓?	n/a	✓✗	?	✓
	c. Needs ++	n/a	n/a	✓✓✗	✗	✓✗

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*	✓	✓	✓	-	-	?	-	-	-	✓ ✗	✓ ✗	-	✓	✓ ✗	✓	✓	✓	✓?	✓✓
	b) Needs+	✓✓	✓	✓✓	✗	✗	?	✗	?	-	✓ ✗	✓ ✗	✗	✓ ✗	✓ ✗	✓✓	✓✓	✓✓?	✓?	✓✓
2) Focus on UK Central Hub and HS2 Interchange	*a) Needs*	✓✓	✓	✓✓ ✗	-	?	?	?	?	✓ ✗	✓✓ ✗	✓	-	✓✓	✓ ✗✗	✓✓	✓	✓	✓?	✓✓ ✗
3) Focus on Urban Extensions	*a) Needs*	-	✓	✓	-	-	?	-	-	✓ ✗	✓ ✗✗	✓ ✗	✗	✓	-	✓	✓	✓	✓ ✗	✓
	b) Needs+	✓	✓	✓✓ ✗	✗	? ✗	?	?	-	✓ ✗✗	✓ ✗✗	✓✓ ✗	✗✗	✓	✗	✓✓	✓	✓✓	✓ ✗	✓
	c) Needs++	✓✓ ✗	✓	✓✓ ✗✗	✗✗	? ✗	?	✗	?	✓✓ ✗✗	✓ ✗✗✗	✓✓ ✗✗	✗✗✗	✓ ✗	✗✗	✓✓✓	✓✓?	✓✓✓	✓✓ ✗	✓ ✗
4) Focus on New Settlements, and significant expansion of Rural Settlements	*a) Needs*	-	✓	✗	-	-	?	-	-	-	✓ ✗	✓ ✗	✗	-	✗	✓	✓	✓	?	✓ ✗
	b) Needs+	✓	✓	✓ ✗	✗	✗	?	?	-	? ✗	✓ ✗✗	✓ ✗✗	✗✗	✗	✗	✓✓	✓	✓?	?	✓ ✗
	c) Needs++	✓✓ ✗	✓	✓ ✗✗	✗✗?	✗	?	✗	?	? ✗	✓ ✗✗✗	✓ ✗✗✗	✗✗✗	✗✗	✗✗	✓✓ ✗	✓✓?	✓✓ ✗	✗	✓ ✗✗
5) Combination of SUEs, Central Hub and HS2, and accessible settlements	*a) Needs*	✓	✓	✓	-	-	?	-	-	✓ ✗	✓ ✗	✓	-	✓	-	✓	✓	✓	✓	✓✓
	b) Needs+	✓✓	✓	✓	✗	? ✗	?	?	-	✓ ✗	✓ ✗	✓ ✗	✗	✓✓	-	✓✓✓	✓✓	✓✓?	✓	✓✓
	c) Needs++	✓✓✓ ✗	✓	✓ ✗	✗✗	? ✗	?	✗	?	✓ ✗✗	✓ ✗✗	✓ ✗✗	✗✗	✓✓ ✗	✗	✓✓✓	✓✓✓	✓✓✓ ✗	✓ ✗	✓

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 D: Appraisal of refined spatial options (Reg19)

This appendix presents the appraisal of the refined Strategic Options, undertaken Summer – Autumn 2020.

1. Regeneration

To contribute to economic development initiatives that benefit regeneration and the Borough's communities; especially those identified as deprived.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓ ✗?	✓✓ ✗?	✓✓✓ ✗✗?

Overview

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).

The major regeneration opportunities are associated with North Solihull, UK Central and the HS2 interchange. Therefore, distribution alternatives that focus on these areas are likely to have the greatest benefits.

Meet needs (13,000 dwellings)

For option 1A, minor positive effects are predicted. Whilst growth is promoted in urban areas, those of greatest need are not focused upon. However, distribution of growth along transport corridors and hubs will help to support those that have no access to a car or prefer to travel by alternative means.

HMA allowance (15,000 dwellings)

At this scale of growth, the effects are broadly the same as for option 1a, given that the focus is on urban areas and public transport hubs. However, the addition of a broad location in one of three locations is proposed.

For option 2a, this is at the UK Central Hub HS2 interchange, which as one of the main regeneration opportunities for the borough is likely to generate a more pronounced positive effect. Therefore, moderate positive effects are predicted overall.

Option 2b involves growth south of the A45. Whilst not directly within areas of deprivation or in need of regeneration, there could be links drawn with UKCH and HS2 to the north. This would be dependent upon inclusive and accessible development though, so a question mark is raised at this stage.

Option 2c involves an expansion to Balsall Common, which is unlikely to have any direct positive effects in terms of regeneration given its rural nature (regardless of the precise location). Therefore, the effects remain minor positive overall when considered alongside the growth already proposed in urban areas and along transport hubs

HMA allowance + (16,000 dwellings)

This set of options involves a slight uplift in growth compared to 2a, 2b, 2c. Several SUEs would be involved for each option, totally 500 dwellings. These would be largely in non-deprived locations and would have no direct benefit in terms of regeneration. Therefore, the effects are not predicted to be different to options 2a, 2b and 2c.

However, option 3a would involve further growth at HS2 sites. So moderate positive effects are predicted as per option 2a. The additional 500 dwellings in this location is not considered likely to tip the balance towards major effects occurring.

Option 3b would involve growth at the A45, at a larger scale compared to option 2b. This too is considered to be a moderate positive effect.

Option 3c would place all additional growth at Balsall common, and for the same reasons as option 2c, this would mean only minor positive effects are generated.

HMA allowance ++ (19,000 dwellings)

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This will likely generate substantial opportunities for housing and employment that is in close proximity to some of the more deprived areas in the borough. Along with the broader focus on urban areas, controlled expansion, and public transport hubs this could create significant positive effects in terms of regeneration.

Option 4b proposes the same scale of growth, but some of this would be directed to Balsall Common instead of all being north of Solihull. As a consequence, only moderate positive effects are predicted.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Similar to Option 4a, option 5a also involves significant growth at the north of Solihull, which constitutes significant positive effects in terms of regeneration. Option 5b directs some of this growth away towards Balsall common instead, so the effects are only moderately positive. Option 6 involves growth in all locations, and therefore ought to have significant benefits in terms of regeneration.

However, at higher levels of growth, 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 might also apply across wider parts of the HMA as a very large number of unmet needs from Birmingham would be placed in Solihull on greenfield sites). This could have negative implications in the short term, though a well planned / phased approach to site release would negate these effects. Therefore, whilst the positive effects are likely to be greater in terms of long term regeneration; minor negative effects are also recorded for option 5a and 5b and moderate negative effects for option 6.

2. Employment

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓✓	-	✓✓	✓✓	✓✓?	✓✓	✓✓	✓✓?	✓✓✓	✓✓ ×	✓✓✓ ×	✓✓ ××	✓✓✓ ××

Meet needs (13,000 dwellings)

Option 1a focuses development within the urban area and in accessible locations (including those along transport corridors) which will help to increase the proportion of new development that has good access to employment, education and training opportunities. Competition for jobs is likely to remain the same under each growth scenario, but local residents ought to have some advantage over those that would need to travel further. Potential significant positive effects are predicted overall.

Without the release of additional sites (as per option 1b), the effects would likely be neutral. There would be less accommodation to support workforce, and the benefits offered by construction and increased investment that comes with housing growth would be absent.

HMA allowance (15,000 dwellings)

Option 2a includes growth at UK Central Hub HS2 interchange and Option 2b involves growth south of the A45, south of the UKCH and HS2 site. Focus on the UK Central Hub Area and HS2 in addition to Option 1a areas should present good opportunities to link housing to the proposed new employment and education opportunities. There is also potential for development at Option 2b to be designed to integrate with employment opportunities at the UKCH and HS2 site. A positive effect is predicted overall. Therefore, significant positive effects are predicted.

Option 2c includes growth at Balsall Common in addition to Option 1a areas. Whilst employment, education and training opportunities are limited in Balsall Common, parcels to the north east and north west benefit from good access to Berkswell train station with frequent and fast services to Birmingham city centre, Coventry and other centres. Therefore, depending on the location of development at Balsall Common, under this option there is potential for some growth to occur in locations with poor access to employment, education and training opportunities although the major of growth should have good access. The effects are predicted to be significantly positive, but there remains an element of uncertainty as to whether some of the growth would be ideally located in terms of employment access.

HMA allowance + (16,000 dwellings)

This set of options involves a slight uplift in growth compared to 2a and 2b. Concentrating additional growth at UKC Hub (Option 3a) or South of A45 (Option 3b) would result in a moderate positive effect through increasing housing provision in an area with proposed new employment, education and training opportunities.

Several SUEs would be involved for each option totalling 500 homes. The SUEs adjoin areas with limited employment opportunities. However, the SUEs at Dorridge and Widney Manor are located in close proximity to train stations with services to Solihull and Birmingham city centres. The SUEs are located in areas with educational facilities, the level of growth proposed split between the three sites is unlikely to result in creating the economies of scale required to improve local provision.

Overall, the effects remain the same as the corresponding options under scenario 2.

HMA allowance ++ (19,000 dwellings)

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This presents enhanced opportunities to link housing to the proposed new employment and education opportunities. The overall scale of growth is also higher, which will bring opportunities in design, construction and other associated professions during the Plan period. Likewise, such development is likely to bring increased local spending in centres, particularly those were growth is proposed. As such major / significant positive effects are predicted.

Option 4b intensifies growth south of Balsall Common. The immediate area has limited employment, education and training opportunities and although the site has good access to the road network, it has poor public transport accessibility to major areas of opportunity such as Solihull city centre and UKCH / HS2. A large increase in housing in this location could potentially support new localised employment and retail opportunities, and would also create jobs in the construction industry. These all contribute to a significant positive effect (in combination with the remaining growth across the district).

Conversely, Option 4b is likely to result in some minor negative effects too. A significant amount of growth will be accommodated on sites in periphery locations of settlements with limited local employment, education and training opportunities. Whilst some of these sites enjoy good transport access to opportunities, this would require people to travel further which will result in less than ideal links between new housing growth and employment, .

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Similar to Option 4a, Option 5a also proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This is predicted to have major significant positive effects. The amount of growth proposed at SUE sites and at Balsall Common is significant and employment, education and training opportunities are more limited in this local area. Cumulatively, the scale of growth proposed is likely to exceed the reasonable employment, education and training opportunities to be made available in Solihull during the plan period, with a greater disadvantage in areas of existing poor provision. Therefore, a minor negative effect is predicted also.

Option 5b will result in the further intensification of growth at Balsall Common. The scale of growth would likely require development on all three site parcels and result in significant employment, education and training demands locally. Due to the economies of scale involved, it is likely that some improvement in education provision may occur but the reliance for employment and training is likely to remain upon existing and proposed employment hubs. Therefore, a significant negative effect is predicted. Elsewhere, positive effects on the economy would be generated as discussed for previous options. Therefore, the overall picture is mixed.

Option 6 gives rise to the benefits associated with growth in the urban areas, along transport hubs and close to the UK Central Hub. However, the sheer scale of growth would be likely to exceed local provision of employment, and people would be more likely to have to commute further afield to access employment. This could be a disadvantage for some communities. Therefore, the overall effects are mixed.

3. Transport and infrastructure

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓	✓✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			✗	✗	✗	✗	✗	✗	✗	✗	✗✗	✗✗	✗✗✗?

Meet needs (13,000 dwellings)

Option 1a focuses development in the urban area and in accessible locations with good existing infrastructure, 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). As a result, only minor positive effects are predicted overall.

Option 1b would place development in generally accessible locations that ought to be possible to accommodate on existing networks and would reduce the need to travel by car. This is a significant positive effect.

HMA allowance (15,000 dwellings)

Similar effects to Option 1a are likely to be experienced under Options 2a and 2b, whereby concentration near 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 minor negative effects on the network in these locations. Overall, a mixed effect is predicted.

Option 2c proposes growth at Balsall Common in addition to Option 1a. Growth in Balsall Common is likely to result in increased demand for travel from Balsall Common to Solihull, Coventry and key employment areas including UK Central. The level of growth proposed in Balsall Common, whilst significant, can be accommodated on the site to the north east and north west and on land in close proximity to Berkswell train station. This will reduce strain on existing highway infrastructure. Additionally, the economies of scale involved with the level of growth should support some local enhancements to the road infrastructure. Therefore, a combination of minor positive and negative effects are predicted.

HMA allowance + (16,000 dwellings)

Concentrating additional growth at UKC Hub (Option 3a) or South of A45 (Option 3b) would further capitalise on proposed new transport infrastructure (HS2 Interchange) and employment opportunities. Similarly, additional growth in these locations could increase traffic congestion on the local road network. Overall, as with Options 2a and 2b, a combination of positive and negative effects are predicted. The additional growth is not thought likely to top the balance towards significant effects (either positive or negative).

The additional SUEs are located adjacent to settlements with a range of services but limited employment opportunities. Therefore, generating some need for travel for purposes such as employment. At this scale, most of the growth proposed for the SUEs can be delivered on sites in Dorridge, Knowle and Widney Manor which benefit from good access to the local train station. Though additional car trips are likely to be generated, the scale of growth spread between the sites should further avoid excessive strain on the local road network in any particular location. Therefore, a neutral effect is predicted in this respect. Overall, the SUEs are predicted to have a minor positive effect.

Overall, the effects for options 3a, 3b and 3c are therefore predicted to be broadly the same as for 2a, 2b and 2c respectively.

HMA allowance ++ (19,000 dwellings)

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This will cause similar positive effects to Options 3a and 3b through the concentration of growth in an area with proposed transport infrastructure (HS2 Interchange) and employment improvements. The scale of growth would result in significant increases in road traffic in the local area which could have significant negative effects. However, economies of scale through the proposed housing and employment growth in the area is likely to contribute towards improvements to the local road network, resulting in a minor negative effect in this regard overall.

The remaining growth throughout the borough is broadly located in accessible locations and is spread so that it ought not to create significant effects on particular local streets and junctions. However, the cumulative effect of accommodating a much higher scale of growth across the borough is likely to negate any positive effects in terms of good accessibility. The overall picture across the borough in terms of transport infrastructure is therefore likely to be a minor negative (in the absence of significant strategic improvements).

Option 4b proposes less growth in north Solihull compared to 4a, but involves growth at Balsall Common. This is predicted to intensify the negative effects in Balsall associated with increased traffic and accessibility issues. This level of growth is also likely to promote car reliance in some areas, and add strain to the existing road network in Balsall Common; although some improvements could be achieved through developer contributions. Overall, a minor negative effect is predicted.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Similar to Option 4a, Option 5a also proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. Option 5a further proposes substantial growth at Balsall Common. The effects in these strategic locations are both negative, and when combined with the remaining growth across the borough, there is potential for significant negative effects to arise.

Option 5b will result in the further intensification of growth at Balsall Common. Due to the economies of scale involved, it is likely that some improvements to local road infrastructure will be delivered. However, the scale of growth would add significant pressures on the local road network and this is predicted to result in a significant negative effect. Combined with the pressures on the network elsewhere in the borough, a significant negative effect is predicted overall. However, much of the additional growth would be drawn away from Solihull, perhaps relieving some pressure on infrastructure in that location. On balance, a significant negative effect is predicted.

Option 6 involves substantial growth that could affect transport infrastructure in several locations, particularly around Balsall and to the north of Solihull. The cumulative borough-wide effects are therefore potentially major significant negatives. At the scales of growth involved at strategic locations, it could be possible to achieve infrastructure enhancement, and in the case of north Solihull, the locations are accessible from alternative modes of travel. This could therefore mitigate negative effects, so there is an element of uncertainty as to whether significant negative effects would occur.

All of the options at this scale of growth do involve large amounts of growth in accessible locations that reduce the need to travel. Therefore, minor positive effects are also predicted in this respect. The ability of the network to cope with significant growth would be the main issue for such high levels of growth.

4. Resource efficiency

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	-	✓	-	-	-	×	×	×	××	××	×××	×××	×××

Overview

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.

Meet needs (13,000 dwellings)
HMA allowance (15,000 dwellings)

For growth option 1 and 2, the level of growth would be more in-line with the housing needs of the borough, and therefore, the effects on resource use are predicted to be broadly neutral for each distribution alternative. Alternative 1b would see much lower housing growth, which theoretically should minimise the requirement for virgin materials and the generation of wastes in Solihull. This is a minor positive effect, but it should be noted that housing would need to be delivered elsewhere in the greater Birmingham area, so the effects could be more notable in those locations.

HMA allowance + (16,000 dwellings)

Growth Options 3a, 3b and 3c 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). There would also be a greater demand for minerals for development at this scale of growth. **Minor negative effects** are predicted.

HMA allowance ++ (19,000 dwellings)

At a higher level of growth still, waste generation and demand for minerals increase further. The impacts upon natural resources such as water and land are also more likely to increase as greater amounts of greenfield land are developed. This constitutes **significant negative effects** regardless of distribution.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Growth Option 5 and 6 lead to very high levels of growth and therefore greater waste generation overall (though this would be offset from Birmingham, which is unable to meet its own housing needs). **Major significant negative effects** are predicted**.**

5. Greenhouse gases

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	-	-	?	-	-	?	-	-	? x	? x	? xx	? xx	? xx

Overview

Increased awareness of the benefits of adopting low carbon technologies may see a rise of its usage within the Borough in the longer term. Likewise, housing construction will need to use more low-carbon techniques and efficiency measures to meet current and future housing standards. As a result, it is expected that per capita C02 emissions are likely to decline from the level of 1,329 Kilotonnes in 2017[1]. However, with population growth and development the overall CO2 emissions may not decrease rapidly.

There may be a shift in terms of how energy is sourced as the Borough attempts to adopt more sustainable methods of energy production and consumption. This might include the development of renewables and technologies to unlock energy through waste and biomass. In addition to positive environmental effects, this shift to a low carbon economy may also help to create long term jobs in the sustainability sector. 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.

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 Option 1a to 2c would be predicted to have broadly neutral effects; Option 3a to 4b would have minor negative effects with Options 5a to 6 predicted to have significant negative effects. It should be acknowledged though that the effects in Solihull may well be offset or transferred elsewhere. For example, delivering large amounts of housing In Solihull might decrease emission from Birmingham.

Meet needs (13,000 dwellings)
HMA allowance (15,000 dwellings)

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 that do not involve development in this location are predicted to have neutral effects. This includes Option 1a, 1b, xxx and xxx.

Option 2a includes growth at the UKCH and HS2 locations, which could possibly present opportunities for district energy schemes. There are uncertainties though.

[1] Local Government Association, CO2 Emissions Estimates- Total per capita in Solihull, Accessed:24/06/20 https://lginform.local.gov.uk/reports/lgastandard?mod-metric=440&mod-area=E08000029&mod-group=AllLaInRegion_WestMidlands&mod-type=namedComparisonGroup

Options 2b and 2c involve growth in locations which are less likely to potentially help support district energy schemes through linkages to existing and emerging development. Therefore, neutral effects remain.

HMA allowance + (16,000 dwellings)

The additional growth involved for these three options (above scenario 2) is split between several urban fringe locations and additional growth at either UKCH, A45 or Balsall Common. The urban extension sites are not of the scale or in locations that present particular opportunities in terms of renewable energy. Therefore no additional effects would be anticipated. The additional growth involved at the UKCH would not be of a scale to lead to significantly greater opportunities, and only represents additional housing rather than a mix of uses. The effects are therefore predicted to be the same as under scenario 2.

HMA allowance ++ (19,000 dwellings)
HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Development will generate emissions regardless of location as a result of construction and accommodation of buildings. In this respect, the negative effects associated with these Options is related to growth, rather than distribution.

In terms of opportunities for renewable energy, the increased concentration of growth around the UKCH/HS2 and A45 could create greater demand for energy from such sources. Although this would all be residential, there are other economic activities nearby that provide a wider mix of uses. As with lower levels of growth, these effects are still uncertain as they rely on technical feasibility and viability.

6. Business Resilience to Climate Change

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	?	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**

Overview

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 located 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.

A more rural/dispersed approach could see more dwellings located in more isolated areas that have less scope to respond to climate events. This could in turn affect their ability to attend work and / or disrupt business activity. These are uncertain effects though.

With regards to resource efficiency, this is again something that can be achieved through good design regardless of location. Infrastructure that supports a transition to more resource efficient business activities can assist in this respect though. Therefore, locations that are the focus of investment present the opportunity to contribute towards enhancements in public transport, electric charging points, and the provision of green infrastructure (which all help businesses). Increased housing growth can help to support such infrastructure. Therefore, where housing coincides with existing and planned employment growth, synergies could potentially exist. Of the strategic locations, the UKCH / HS2 is most beneficial in this respect, followed by the A45 and then Balsall common. In this respect, options 4a, 5a and 6 (which all involve the greatest growth in these locations) are more favourable. It is difficult to determine whether effects would be significant or not though, so uncertainties remain.

7. Flooding

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	-	-	?	?	?	?	?	?	✗?	✗	✗?	✗?	✗?

Overview

There is potential for flooding from various sources within Solihull, including watercourses, surface water and groundwater. The majority of proposed development land for all the options 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). Overall generally sites within the urban core tend not to overlap with fluvial flood risk 2 or 3 with larger greenfield proposals resulting in some overlap. On the larger strategic sites it ought to be easier to avoid areas of flood risk given that green infrastructure can be incorporated into layout and design, and the overlaps are relatively small.

The Solihull Strategic Flood Risk Assessment 2017 indicates 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 ditches.

Solihull Strategic Flood Risk Assessment[2] – Summary of Surface Water Flood Risk

Settlement	Commentary
Balsall Common	The majority of surface water flood risk falls to areas in the vicinity of the River Blythe Tributary, and two unnamed drains in the west and north east. Additional risk is predominantly confined to dry valleys leading to the three watercourses which present significant risk to properties.
Meriden	Surface water flooding up to the 1% AEP (Annual Exceedance Probability) is relatively minor with small flow routes following roads such as Leys Lane. However, at 0.1% AEP a significant flow route is present from Alspath Road, crossing The Croft and Main Road, flooding predominately open spaces and gardens, towards the unnamed drain and lake near Meriden Hall in the south. There is also significant risk to properties in the vicinity of the unnamed watercourse in the west of Meriden.
Hampton in Arden	The majority of surface water flood risk falls to areas in the vicinity of existing watercourses with additional risk predominantly confined to roads such as High Street and Meriden Road.
Dorridge	The surface water flood risk to Dorridge is predominantly via run-off from surrounding dry valleys towards the surrounding watercourses. In the 0.1% AEP event there is significant areas of ponding on Conker Lane (path) with the surface water extent causing risk to properties in the area.
Marston Green	Surface water flooding is largely confined to the close vicinity of existing watercourses. Mapping also shows surface water ponding in open spaces and gardens. However, there is a large flow route through Birmingham International Airport towards Low Brook.

[2] Solihull Metropolitan Borough Council Strategic Flood Risk Assessment – Final Report April 2017 https://www.solihull.gov.uk/Portals/0/Planning/LPR/Strategic-Flood-Risk-Assessment-Report.pdf Accessed 24/06/20

Knowle	The majority of properties within Knowle are not within surface water flood risk extents. However, properties in the vicinity of the Purnell's Brook and the unnamed drain to the north east are at risk in the 0.1% event where the surface water extent is significantly larger than in lower return periods.
Chelmsley Wood	Mapping shows that surface water flood risk is predominately confined to roads which act as conduits for run off toward the River Cole. In the 0.1% AEP event there is a prominent overland flow route in the normally dry-valleys adjacent to Greenlands Road which causes significant flood risk to properties.
Kingshurst	The majority of properties in Kingshurst are not within surface water extents. Areas at risk tend to be roads, which are conduits for run-off from the surrounding hills (e.g. Gilson Way, Fordbridge Road, Meriden Drive). There are a few properties at risk along Fordbridge Road during the 0.1% AEP event.
Castle Bromwich	The majority of properties within Castle Bromwich are not within surface water extents in the 1% AEP event. However; a significant number of overland flow routes, via local roads and dry valleys, present a risk to properties in the higher return periods.
Solihull	Mapping shows surface water flood risk for the 1% AEP event in Solihull is relatively minor, with ponding on roads and in open space, with a minor flow route following the River Cole in the south east. However, in the 0.1% AEP event the surface water extent covers significant amount of Solihull with the majority of the road network at risk from surface water flooding. Properties in the vicinity of existing watercourses and flow routes through dry valleys are at risk in the higher return periods.
Dickens Heath	Mapping shows surface water flood risk in Dickens Heath is in isolated pockets in the 1% AEP, the largest along Griffin Lane with several notable flow routes following existing watercourses including the Stratford-upon-Avon canal. However, risk is widespread in the 0.1% AEP, following the path of the roads and waterways. Numerous residential and commercial areas are at risk from a 0.1% AEP. Areas most affected include Yarn Lane and Rumbush Lane.
Cheswick Green	The majority of surface water flood risk falls to areas in the vicinity of existing watercourses with additional risk predominantly confined to roads and ponding in rural areas and gardens. Areas notably at risk include Coppice Walk, Watery Lane and Saxon Wood Road. The majority of risk is from a 1% or higher AEP event.

<u>Meet needs (13,000 dwellings)</u>

Development under growth Option 1a broadly avoids locations which are at risk of fluvial flooding, with only a small amount of overlap between site options and flood zone 3. Some exceptions to this include Site 12 - South of Dog Kennel Lane, Site 20 - Land Damson Parkway and Site 10 Blythe Valley Park where at least some of the site is in Flood Zones 2 or 3 (up to 50%). However, overall for the option at this level of growth it ought to be possible to avoid areas at risk of flooding and to mitigate potential risk at this level of growth. Therefore, neutral effects are predicted.

Development under growth Option 1b broadly avoids locations which are at risk of fluvial flooding, with only a small amount of overlap between the site options and flood zone 3. Overall for option for this level of growth it ought to be possible to avoid areas at risk of flooding and to mitigate potential risk at this level of growth.

It is unlikely that development under Option 1a and 1b would exacerbate surface flood events to a significant extent.

<u>HMA allowance (15,000 dwellings)</u>

As per option 1a, development in the urban areas and along transport hubs broadly avoid locations which are at risk of fluvial flooding. There are some exceptions as discussed above.

For option 2a, further growth is proposed at the UK Central Hub HS2 interchange, where at least some of the site is in Flood Zones 2 or 3 (up to 50%). Concentrated development could also result in increased surface water run off which becomes more difficult to manage. However, the strategic nature of the 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 option and therefore flood risk elsewhere would be unlikely to change. Overall, an uncertain effect is predicted; as whilst negative effects are unlikely should not be ruled out.

Development under growth Option 2b broadly avoids locations which are at risk of fluvial flooding, with only a small amount of overlap between the site options and flood zone 3. Some exceptions to this include Site 12 - South of Dog Kennel Lane, Site 20 - Land Damson Parkway and Site 10 Blythe Valley Park where at least some of the site is in Flood Zones 2 or 3 (up to 50%).

Option 2b involves growth south of the A45 (BI3 Coventry Road, S of Airport) where some of site in Flood Zone 2 and 3 (up to 50%). 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 Option, and therefore flood risk elsewhere would be unlikely to change.

<u>HMA allowance + (16,000 dwellings)</u>

The reasons outlined above for option 2a-2c also apply to option 3a, 3b and 3c. 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. The additional sites involved at this scale of growth are mostly within flood zone 1, and so further effects are considered likely.

<u>HMA allowance ++ (19,000 dwellings)</u>

At this higher level of growth, development in the additional strategic locations becomes more widespread / denser. Provided that development is designed to ensure no net increase in run off or impermeable land, the effects on the baseline position ought to remain minor. However, there is a possibility that hydrological systems will be affected to a greater degree given the higher demands upon drainage networks, water infrastructure and changes in land use. Higher levels of growth could be countered to a degree by infrastructure enhancement. However, a precautionary approach is taken at this level, resulting in minor negative effects being recorded for each option. A higher level of growth to the west (i.e. UK Central Hub and South of A45) could potentially contribute to surface water flooding issues in this part of the borough that are more prevalent when comparted to the east. This raises some question marks over the effects for Option 4a.

<u>HMA allowance +++ (22,000 dwellings / 25,000 dwellings)</u>

The highest levels of growth are proposed under scenarios 5 and 6. At this level, the scale of growth in additional strategic locations is much higher either at a specific location or across the borough as a whole. This puts greater pressure on water infrastructure networks still, and a greater built land footprint means that natural drainage solutions may be more difficult to implement. Whilst most of the locations involved in development would avoid flood risk zones, it is likely to put more stress on the flood management systems which exist in settlements. This, combined with the increased loss of what is likely to be permeable, agricultural land, means the scenario is considered to incur a negative effect. Given that most areas would be outside of existing flood zones, significant effects still remain unlikely. Therefore, minor negative effects are predicted. Well-designed, green-infrastructure led schemes that make use of natural drainage features could neutralise these effects though and perhaps lead to enhancement.

8. Climate change adaptation

To ensure that development provides for adaptation to urban heating, the effects of high winds and assists in promoting positive behaviour change.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	-	-	-	-	-	-	-	-	×?	×?	×?	×?	×?

Overview

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).

Meet needs (13,000 dwellings)
HMA allowance (15,000 dwellings)
HMA allowance + (16,000 dwellings)

At lower levels of growth, there is less potential for protective factors in terms of climate change resilience would be permanently lost (for example green space). However, the potential to implement enhancements would also be

HMA allowance ++ (19,000 dwellings)
HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Where development is greater in magnitude, or more geographically focused, the potential to affect the function of green space in and around urban areas would be more pronounced (whether this be positive or negative). Therefore, it may be more likely that negative effects would occur under growth Options 4, 5 and 6, each of which involve substantial loss of greenspace. For those options that involve growth at the A45 and HS2, coupled with existing expansion of the greater Birmingham area, there could perhaps be greater potential for effects in terms of urban heating. There are considerable uncertainties though, and the design of development would be important. A precautionary approach is taken at this stage and so uncertain minor negative effects are predicted at higher scales of growth.

9. Biodiversity

	13,000 / 7650 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✗	-	✓?	✗✗	-	✓?	✗✗	-	✓? ✗✗	✓?	✓? ✗✗✗?	✓? ✗	✓? ✗✗✗

Overview

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 this SSSI (on water quality for example), 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 would fall within SSSI impact zones, suggesting a need to ensure that development do not have an adverse impact on SSSIs, particularly cumulatively.

Generally speaking, at a higher level of 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.

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 SSSIs and local wildlife sites. Green infrastructure and SUDs could also potentially have benefits for wildlife sites by helping to regulate water quality and hydrology.

Meet needs (13,000 dwellings)

For option 1a, the distribution and scale of growth should be possible to accommodate in urban areas and along transport hubs and corridors without having significant effects on SSSIs. However, Local wildlife sites are abundant across Solihull, with a number of involved sites being intersected by designated and/or potential wildlife sites. There is therefore potential for these habitats and species to be affected by development. In particular, several sites on the urban fringes currently contain meadows that could be permanently lost or disturbed. There will be a need to retain habitats, provide mitigation and achieve net gain. Therefore, the effects are predicted to be **minor negatives.**

HMA allowance (15,000 dwellings)

For option 2a, the addition of growth at the UKCH / HS2 would be unlikely to lead to direct effects upon any SSSIs either individually or in combination with the rest of the growth proposed under this option in the urban areas and public transport corridors. Whilst there are local wildlife sites running through the site, these are linear, and ought to be possible given that the scale of growth is relatively low. In fact, these linear corridors ought to form central features of green infrastructure enhancements and present clear opportunities. As a result, the effects of site development are predicted to be neutral or **potentially a minor positive** depending upon enhancement measures that are secured.

For option 2b the broad location involved is overlapped extensively by meadows, of which the majority are designated as local wildlife sites and two areas in particular are SSSIs. The effects would be heavily dependent upon the location of proposed development. Anything that encroaches into these areas would be difficult to mitigate, as the features are currently continuous and so could be fragmented. Should development lead to direct loss or disturbance then the effects would be significantly negative on an individual site basis and also overall from a borough perspective. However, development that was placed in less sensitive areas with buffer areas between green space could reduce the effects somewhat. At this stage, a **moderate negative effect** is predicted.

For option 2c additional growth would be entirely at Balsall, with several possible locations around the settlement. There are small pockets local wildlife sites on all of the sites, but those to the east and south ought to be possible to incorporate into development and potentially achieve net gain given the strategic nature of the sites. Development to the north site could be more problematic given its proximity to the River Blythe SSSI, but this depends upon the mitigation measures and scale of growth involved. At the scale growth proposed under this option (2000 dwellings), there remains flexibility to avoid negative effects, so the overall effects are considered to be **neutral.**

HMA allowance + (16,000 dwellings)

For option 3a, the scale of growth at HS2 interchange would be greater, but this should still be possible to manage without having a detrimental effect on nearby linear ecological features (which would need to be avoided anyway due to flood risk). Further expansion upon sites at the urban fringes would not be in locations of particular sensitivity, and so **potential minor positive effects** are predicted (similar to option 2a).

For option 3b, further expansion upon sites at the urban fringes would not be in locations of particular sensitivity. However, the scale of growth at the broad location South of A45 increases. This creates a greater likelihood that negative effects will occur and / or be more difficult to mitigate. A **moderate negative effect** is predicted.

For option 3c further expansion upon sites at the urban fringes would not be in locations of particular sensitivity. Though growth at Balsall would increase, it would still be at a level that allows flexibility to avoid sensitive locations. Therefore, **neutral effects** are predicted.

HMA allowance ++ (19,000 dwellings)

Option 4A would involve all the development sites proposed for 3a, but would also include large amounts of development south of A45. Whilst some positive effects could occur along linear ecological corridors and through creation of new habitats, there are likely to be negative effects due to a loss or disturbance of local wildlife sites (meadows) and SSSI habitat. The effects do not 'cancel one another out', rather, a mixed effect is predicted overall for this option.

Option 4b would have the same effects as option 3b, given that the distribution of development is exactly the same apart from additional growth around Balsall. It has already been discussed above that neutral effects are predicted at Balsall at a lower level of growth. Given that this site is some distance away from growth in the other urban areas and the UKCH/HS2, cumulative effects in terms of fragmentation, disturbance and loss of habitats are minimal when considering the addition of two broad locations. Whilst the overall increase in development across the borough will generate increased demand for wastewater treatment, with infrastructure upgrades this should not lead to significant deteriorations in water quality.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a involves three broad locations as well as urban growth. As with option 4a, one of these locations is particularly sensitive (south of A45), and so negative effects are predicted. The positive effects associated with green infrastructure enhancement still exists in relation to the UKCH/HS2 sites. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon water quality (and therefore biodiversity) could therefore start to become greater. Taking this into account alongside the negative effects at the A45, this could potentially give rise to **significant negative effects**.

Option 5b involves two broad locations, but avoids the most sensitive broad location south of the A45. However, the scale of growth at Balsall would give less flexibility to avoid the more sensitive areas and would place a greater overall pressure on the natural environment in this location. Whilst enhancement could be possible, a **minor negative effect** is predicted overall.

Option 6 maximises growth across the borough, further increasing potential for significant negative effects with regards to pressure on natural ecosystems. There is also less flexibility to avoid negative effects at Balsall common and south of the A45. Therefore, significant negative effects are likely to occur.

10. Landscape

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.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	×	✓?	×	×	×	×	×	×	××	×	××	××	×××

Overview

With the exception of option 1b, development under all the other alternatives will involve the loss of Green Belt, and therefore there will likely 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, it is likely that the negative effects would be more pronounced for each of the distribution alternatives as more areas of greenfield land will be affected (whether Green Belt or not). The design of schemes will influence the extent and nature of effects.

Meet needs (13,000 dwellings)

Option 1A focuses growth to transport hubs and corridors and would include Solihull Town Centre, North Solihull/ Chelmsley Wood, the A34 Corridor and support strategic priorities in Solihull Connected. This development would be unlikely to have effects upon landscape character, and so neutral effects are anticipated. However, there would also be growth including urban extensions south of Shirley (LAC2 – overall sensitivity *high*) and limited to significant expansions of villages/settlements of Dickens Heath (LAC2 – overall sensitivity *high*), Knowle (LAC3 – Overall sensitivity *medium*) and Balsall Common (LCA 4 – overall sensitivity *medium* and LCA 5 overall sensitivity *medium)*. Development in these locations could affect the character of settlements, increasing the sense of urban fringe rather than open countryside. Given the sensitive nature of some of these locations, minor negative effects are recorded.

For option 1b **positive effects** are predicted. The option has a largely urban area focus with no Green Belt release proposed with a more limited level of growth proposed. The proposals are less likely to affect the character of settlements resulting in an increase in the sense of urban fringe rather than open countryside. However, given that housing needs would not be met in full, there could be pressure for speculative development on sensitive land. This brings an element of uncertainty.

HMA allowance (15,000 dwellings)

In addition to the effects identified for Option 1a, Option 2a would also include development at UK Central Hub Area and HS2 interchange. There would be potential for negative effects in this part of the borough as the site is large and currently open. However, it is bounded on all sides by roads and its development would not lead to coalescence or extend existing settlements. Therefore, only minor negative effects are predicted.
The use of UK Central Hub Area and HS2 interchange site (LCA 9 – overall sensitivity *medium*) would also reduce the need for development in other more sensitive locations across the Borough, helping to preserve the

character of rural settlements and the 'Arden Pasture' areas to the south-west. Overall, a minor negative effect is predicted for option 2a.

Option 2b involves growth south of the A45 (LCA 1 – overall sensitivity *medium*) rather than the UK Central Hub Area and HS2 interchange site. The scale of development associated with the site south of the A45 would result in a negative impact associated with the loss of some land that currently separates Catherine -de-Barnes from Elmdon Heath and Birmingham Airport. The effects would depend upon the layout and design of development, but at the scale involved it ought to be possible to mitigate significant effects. Therefore, minor negative effects are predicted overall for Option 2b.

Option 2c is more reliant on further urban extensions at Balsall Common, including potential growth at GL Hearn New Rural Settlement sites as Balsall Common North (LCA 5 overall sensitivity *medium*), South (LCA 5 overall sensitivity *medium*) and East (LCA 4 overall sensitivity medium). Development in these locations could affect the character of settlements, increasing the sense of urban fringe rather than open countryside. At the scale of growth involved, it ought to be possible to avoid the more sensitive locations and to incorporate green infrastructure to mitigate impacts on landscape character. Therefore minor negative effects are predicted overall.

<u>HMA allowance + (16,000 dwellings)</u>

Option 3a is similar to Option 2a however the option proposes more growth at UK Central Hub – (NEC site in BLR) and includes sustainable urban extensions known as Amber Sites. The additional growth at UKCH is not likely to have significant effects upon landscape character as it involves land on the brownfield register. The additional urban extension sites exhibit some sensitivity though, and so minor negative effects are predicted overall for Option 3a.

Option 3b is similar to Option 2b however the option proposes more growth at GL Hearn Urban Expansion - South of A45 and includes sustainable urban extensions known as Amber Sites. The additional growth at the A45 (2500 compared to 2000 for option 2b) means that negative effects are more likely to be prominent. There should still be flexibility and scope to mitigate and enhance though. Therefore, minor negative effects are predicted overall.

Option 3c is similar to option 2c, but would involve slightly more growth at Balsall common (500 additional dwellings), and would also involve the sue 'amber sites'. The additional growth at Balsall common would make the potential for negative effects higher, but there would still remain sufficient flexibility to ensure that effects are not significant. Therefore, minor negative effects are predicted overall.

<u>HMA allowance ++ (19,000 dwellings)</u>

In addition to the growth proposed in the urban areas and at selected urban extensions, Option 4a also proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. Together, development here would lead to increased urban sprawl from the Solihull and Greater Birmingham urban areas. There should still be scope to implement high quality design and landscaping to mitigate effects, but the potential for significant cumulative effects exists. Therefore, an uncertain significant negative effect is predicted.

Option 4b proposes the same scale of growth, but some of this would be directed to Balsall Common instead of the site south of the A45. By splitting the growth, the cumulative effects associated with Option 4a would be avoided. The growth in both locations is predicted to have minor negative effects as there is sufficient flexibility to mitigate effects and incorporate green infrastructure. Therefore, only minor negative effects are predicted overall.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a involves three broad locations as well as urban growth. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon landscape could therefore start to become greater. This is particularly the case at the UKCH / HS2 and south of the A45 which are relatively close to one another. The growth at Balsall common would also give rise to minor negative effects. Overall, this amounts to significant negative effects.

Option 5b involves two broad locations but avoids the site south of the A45. However, the scale of growth at Balsall would give less flexibility to integrate the level of growth within the landscape. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon landscape could therefore start to become greater, particularly at Balsall Common. Taking this into account this could potentially give rise to **significant negative effects**.

Option 6 maximises growth across the borough, further increasing potential for significant negative effects with regards to pressure on landscape. The potential for cumulative effects upon landscape could therefore start to become greater, both at the UKCH/HS2 and south of A45 and around Balsall Common. Taking this into account this could potentially give rise to **major significant negative effects** as multiple locations would be significantly affected in terms of landscape character.

11. Green Infrastructure

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓	-	✓	✓	✓	✓	✓	✓	✓✓?	✓?	✓✓?	✓✓?	✓✓?
	x		x	x	x	x	x	x	xx?	x?	xx?	xx?	xx?

Overview

The majority of the formal 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 (by increasing accessibility and function) or negatively (by removing areas of greenspace that is being used by communities).

With the exception of option 1b, development under all the other alternatives will involve the loss of Green Belt, which may have localised negative implications on green and open space. However, it is presumed that the larger strategic sites (such as SUEs and strategic growth locations) have the potential 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). Where existing land provides access to informal semi-natural space though, then there could be actual or perceived negative effects on access to green infrastructure.

Meet needs (13,000 dwellings)

Alternative 1a offers the potential to extend networks of GI along public transport routes and hubs by linking potential development sites. Several 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. These are minor positive effects. However, Local wildlife sites are abundant across Solihull, with a number of involved housing sites being intersected by designated and/or potential wildlife sites. These are important contributors to the green infrastructure network, and their severance could be negative from a biodiversity perspective. Therefore potential minor negative effects are predicted.

Option 1b, also involves some growth throughout the urban areas and along transport hubs. No green belt sites would be affected though, and so the potential for negative effects is reduced. Conversely, the opportunities for enhancement and linkages between sites is lower too. Therefore, neutral effects are predicted.

HMA allowance (15,000 dwellings)

For option 2a, the addition of growth at the UKCH / HS2 is on greenfield land, but this is not on land that is used widely for recreation and is not within close proximity to existing residential development. In terms of widely used green infrastructure, the effects are therefore unlikely to be significant. There are local wildlife features intersecting the site though, and the site is likely to provide functions in terms of wider ecosystem services. As a result, there is a potential for negative effects. The need to achieve environmental net gain should mean that such effects could be mitigated though. As a result uncertain minor negative effects are predicted at this stage.

For option 2b the broad location involved is overlapped extensively by meadows, of which the majority are designated as local wildlife sites and two areas in particular are SSSIs. The effects would be heavily dependent upon the location of proposed development. Anything that encroaches into these areas would be difficult to mitigate, as the features are currently continuous and so could be fragmented. Wider ecosystem services could also potentially be impacted upon by built development. However, development in less sensitive areas,

which incorporates enhancements to green infrastructure would help to reduce these effects and potentially lead to positive effects. The scale of growth is such that significant negative effects ought to be possible to avoid. However, a minor negative effect is predicted as a precaution at this stage. In terms of recreation and access to green space, development could potentially lead to benefits in this respect, particularly if it links to surrounding settlements For this reason positive effects are predicted too.

For option 2c, additional growth would be entirely at Balsall, with several possible locations around the settlement. There are small pockets local wildlife sites on all of the sites, but those to the east and south ought to be possible to incorporate into development and potentially achieve net gain given the strategic nature of the sites. Development to the north site could be more problematic given its proximity to the River Blythe SSSI, but this depends upon the mitigation measures and scale of growth involved. At the scale growth proposed under this option (2000 dwellings), there remains flexibility to avoid negative effects, so the overall effects are considered to be neutral. The loss of greenspace around the settlement could also have wider implications in terms of ecosystem services. However, at the scale of growth proposed, it ought to be possible to avoid significant effects in terms of green infrastructure function related to biodiversity and other environmental factors. In terms of its recreational and wellbeing value, strategic growth could possibly lead to enhanced access into areas of greenbelt that are currently agricultural in use. Conversely, it could affect areas of open space that current communities value, which is potentially a negative effect. Overall, the effects at this site are predicted to be mixed. The same is also the case from a borough-wide perspective.

<u>HMA allowance + (16,000 dwellings)</u>

For option 3a, the scale of growth at HS2 interchange would be greater, but this should still be possible to manage without having a detrimental effect on nearby linear ecological features (which would need to be avoided anyway due to flood risk). Further expansion upon sites at the urban fringes would not be in locations of particular sensitivity for biodiversity, and so the effects are predicted to be the same as for option 2a in this respect. The additional SUE sites are in locations where development could affect the experience of recreational use (for example along the Grand Union Canal). However, there is potential to enhance accessibility to such features and to introduce new greenspace that would benefit existing and new communities. Therefore, mixed effects are predicted.

For option 3b, the scale of growth at the broad location South of A45 increases. This creates a greater likelihood that negative effects will occur and / or be more difficult to mitigate in terms of biodiversity and wider ecosystem services. However, it also creates greater opportunities to achieve enhancements. This is entirely dependent upon the exact location and design of development though. Therefore, mixed effects are predicted. The additional SUE sites also present the potential for mixed effects.

For option 3c further expansion upon sites at the urban fringes would not be in locations of particular sensitivity for biodiversity. Though growth at Balsall would increase, it would still be at a level that allows flexibility to avoid sensitive locations. In this respect the effects are minor. As for the other strategic locations, the nature of effects will depend upon location, layout and design. This will determine whether positive effects occur in terms of access to greenspace, or whether effects will be negative due to a loss of amenity and ecosystem services. At this stage, a mixed effect is predicted.

<u>HMA allowance ++ (19,000 dwellings)</u>

Option 4A would involve all the development sites proposed for 3a, but would also include development south of A45. Together, with UKCH / HS2, this will lead to urbanisation across a larger area of currently greenspace on the edge of the built up area of Greater Birmingham. This could affect ecosystem services, and could also directly impact upon wildlife sites. In this respect, a potential significant negative effect exists. Conversely, a well-designed scheme that is green infrastructure led could potentially open up these areas for recreation to new and current communities. This is a potentially significant positive effect for this location, and when considered alongside other opportunities for the borough as a whole.

Option 4b would have the same effects as option 3b, given that the distribution of development is exactly the same apart from additional growth around Balsall. It has already been discussed above the effects of growth at Balsall are unlikely to be significant at a lower level of growth. Given that this site is some distance away from

other large scale growth in the other urban areas and the UKCH/HS2, cumulative effects in terms of fragmentation, disturbance and loss of habitats are minimal when considering the addition of two broad locations. The opportunities in terms of enhanced access to recreation and greenspace areas could be improved, but this depends upon scheme location and design. Overall, at this scale of growth, a minor negative effect and minor positive effect is predicted from a borough-wide perspective.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a involves three broad locations as well as urban growth. As with option 4a, the cumulative effects of growth at UKCH / HS2 presents the potential for significant effects. This could be negative with respect to biodiversity functions and wider ecosystem services. However, it might increase access to green space for surrounding communities, which is positive. A well designed scheme that incorporates green infrastructure as a key feature could also help to mitigate negative effects and facilitate enhancements. As this is very scheme dependent, uncertainties are recorded. This option also includes growth at Balsall, which has similar implications, but at a lesser scale and in an area that is 'buffered' by larger amounts of surrounding greenspace. Therefore, the effects from a boroughwide perspective are not considered to be major. Mixed effects are predicted, and they are likely to be significant given the increased scale of growth. However, it is not certain if the effects would be positive or negative and what elements of green infrastructure would be most affected.

Option 5b involves two broad locations, but avoids the most sensitive broad location south of the A45 (and leads to lower amounts of urbanisation in north Solihull. However, the scale of growth at Balsall would give less flexibility to avoid the more sensitive areas and would place a greater overall pressure on the natural environment in this location. The wider ecosystem services that open greenspace performs in this location could therefore be more vulnerable to significant effects. The scale of urbanisation involved could also affect access to countryside for communities in Balsall Common. The strategic nature of the sites ought to make it possible for positive changes to be made in terms of recreation. The key issue is whether the effects would be beneficial from a multi-functional perspective. Overall, significant effects are possible when considering the overall increase in growth across the borough and the very high level of growth at Balsall. These are potentially positive or negative depending upon what aspect of green infrastructure is being viewed and the precise location and nature of development.

Option 6 maximises growth across the borough, further increasing potential for significant negative effects with regards to pressure on Green Infrastructure. There is also less flexibility to avoid negative effects at Balsall common and south of the A45. Therefore, significant negative effects are more likely to occur. Significant positive effects should not be ruled out either though, as enhancement is a possibility.

12. Historic Environment

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✗	-?	✗✗	✗✗?	✗	✗✗	✗✗	✗✗	✗✗?	✗✗?	✗✗✗	✗✗✗	✗✗✗

Overview

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.

Conservation Areas are 'areas of special architectural or historic interest in the character or appearance of which it is desirable to preserve or enhance' designated by the borough council. There are 20 conservation areas in the MBC.

A Heritage Impact Assessment (HIA) has been carried out by *dbp* on behalf of Solihull Metropolitan Borough Council in March 2019[3]. This exercise has considered the potential impact on heritage assets resulting from development of six sites identified in the Solihull Metropolitan Borough Council Local Plan Review. The HIA has not considered the spatial options outlined above. The six sites include the following;

HIA – Assessed Sites (2019)

Site Name	HIA Findings	Site potentially included in Options
Site 1 Barratt's Farm, Balsall Common	*Development of Site 1 would fail to preserve and would cause harm to the setting of the Grade II listed Poplars Farm, Barratt's Farm and its associated barn which lie within the site. It would have a neutral impact on the setting of the Grade II listed no's 83a, 83 and 85 Meeting House Lane and The Brickmakers Arms, Station Road all of which are adjacent to the site.* *The assessment suggests that further expert advice is sought to establish the area's landscape value. It also suggests by way of mitigation that fields adjacent to Poplars Farm and Barratt's Farm are left largely undeveloped and that existing footpaths throughout the site should be retained as public amenities.*	1a, 2a,2b,2c,3a,3b, 4a,4b,5a,5b and 6a
Site 3, Windmill Lane, Balsall Common	*The heritage asset potentially affected by development is the Grade II* Berkswell Windmill. Although sited within a rural area the windmill is not in an isolated location and several properties and a mobile homes site are in close proximity. The windmill is a highly important building as reflected in its listing at Grade II* and it is highly sensitive to change in its setting.* *The assessment concludes that the visual effect of developing the southern part of the site would fail to preserve and would cause harm to the setting of the windmill. Such harm should be wholly exceptional.* *By way of mitigation it suggests that areas of land at the southern end of Site 3 should remain undeveloped, that views to and from the windmill should remain open and that no development should exceed two stories to ensure that the windmill remains the tallest building in the vicinity.*	1a, 2a,2b,2c,3a,3b, 4a,4b,5a,5b and 6a

[3] Heritage Impact Assessment https://www.solihull.gov.uk/lpr/evidence

Site 8, Hampton Road, Knowle	*The heritage asset potentially affected by development is Grimshaw Hall, a Grade I listed building and an extremely fine example of timber framing surrounded by attractive gardens and grounds which themselves form part of its setting. The building is of high architectural, artistic and historic interest.* *The assessment concludes that development on large areas of Sites 8A and 8B would fail to preserve the setting of Grimshaw Hall and would cause harm to its setting. Such harm should be wholly exceptional.*	1a, 2a, 2b, 2c,3a,3b,4a,4b, 5a,5b and 6a
Site 12, Dog Kennel Lane, Shirley	*The assessment concludes that development of the site would fail to preserve and would cause harm to the setting of Light Hall and such harm should be exceptional.* *By way of mitigation the assessment suggests that an area of land immediately around Light Hall should remain undeveloped and that a field adjacent to Tanworth Road should remain open to preserve key views of the house and outbuildings. Land at the junction of Dog Kennel Lane and Tanworth Road should be retained for potential community uses and land north and northeast of the house should be low density development and key views should be established to and from the house. These should then remain as open areas.*	1a, 2a, 2b, 2c,3a,3b,4a,4b, 5a,5b and 6a
Site 13 South of Shirley	*The heritage assets potentially affected by development are the Grade II listed Whitlocks End Farm and the locally listed barn adjacent to the house. The interest these assets is medium having been compromised by extensive alterations and conversion to residential use.* *The assessment concludes that the wider surroundings of the assets have been extensively altered by the tree growing business and that development of the site could have a minor negative impact in failing to preserve the setting of the listed farmhouse but cause no overall harm to that setting given the extent of changes that have occurred.* *By way of mitigation the assessment suggests that the significance of the assets could be enhanced by the preparation of a detailed design brief to outline suggested layout, scale, massing and materials for any new dwellings in their vicinity.*	Not included in any options
Site 19, HS2 Interchange site at Bickenhill	*The assessment identifies Park Farmhouse as having close links with the Hall and Park as the former home of the estate's agent and clearly designed as an "eyecatcher" from the pleasure grounds that lie west of the Hall. This link has not been previously been identified but it is an important historical association between the assets.* *Development of Site 19 would fail to preserve the setting of Park Farmhouse and would cause significant harm to its setting.* *Depending on the scale and location of buildings it could also fail to preserve the setting of the Hall and Park and cause harm to the settings. Such harm should be wholly exceptional.* *The assessment concludes that this can only be fully assessed via a Landscape Visual Assessment carried out in accordance with methodology established by the Landscape Institute.*	2a, 3a, 4a, 4b, 5a, 5b and 6a

Note the HIA does not consider all sites put forward in Option 1a to 6, but all sites have been considered in the SA process.

<u>Meet needs (13,000 dwellings)</u>

For option 1a, the distribution and scale of growth should be possible to accommodate in urban areas and along transport hubs and corridors without having significant effects in terms of the historic environment. However, several of the sites in urban fringe locations either contain or are within the setting of listed heritage assets. There is potential for negative effects upon these assets. The detailed HIA indicates that for Site 1 Barratt's Farm, Balsall Common, Site 3, Windmill Lane, Balsall Common, Site 8, Hampton Road, Knowle and Site 12, Dog Kennel Lane, Shirley would potentially cause harm to existing heritage assets however these could be mitigated depending on detailed sensitive design and other measures. Features surrounding future developments within Solihull Town Centre and East of Solihull also have potential to be impacted upon. There is therefore potential for negative effects upon settlement character, which in some areas could affect Conservation Areas and listed assets either directly or indirectly. Therefore, a **minor negative effect** is predicted for 1a.

For option 1b development in the urban areas 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. There would be limited expansion on the urban fringes, which would protect the rural character of these areas and associated heritage assets. Therefore, overall, it ought to be possible to avoid sensitive assets at this level of growth. Therefore, a **neutral effect** is predicted. In the longer term, the potential for speculative growth would be higher given that housing needs would not be met in full through the proposed allocations alone. This could lead to uncoordinated growth and potential negative implications for heritage. There is therefore an element of uncertainty with this option.

HMA allowance (15,000 dwellings)

The options at this level would all generate minor negative effects as per those described for Option 1a.

Additional growth is proposed at one of three strategic locations. For 2a, this is at the UKCH / HS2. The HIA indicates that Site 19, HS2 Interchange site at Bickenhill could potentially have significant negative effects that cannot be ruled out until detailed visual assessments are undertaken. These conclusions are echoed here and contribute to a significant negative effect from a borough wide perspective when considered alongside the other minor adverse effects upon the historic environment.

Option 2b involves growth south of the A45. This is a large broad location, so impacts would depend upon exact locations. However, the area contains several listed buildings and the Bickenhall Conservation Area. Though this settlement has already experienced nearby urbanisation that has affected character, further growth of a large scale could potentially lead to significant effects. The scale of growth involved could perhaps provide flexibility to mitigate such effects, but a precautionary approach is taken and the effects are recorded as significant.

For Option 2c growth is proposed at Balsall Common within the broad locations surrounding the settlement rather than at the Site South of A45 or UKC Hub. There are varying degrees of sensitivity, so the exact effects would be dependent upon location. However, there are designated heritage assets that are likely to be affected in all of the broad locations surrounding the settlement. To the north in particular, there could be significant effects. At this scale of growth though it ought to be possible to avoid sensitive areas and / or implement mitigation. Therefore, the effects are not predicted to be significant at this site or overall..

HMA allowance + (16,000 dwellings)

For option 3a, the scale of growth at HS2 interchange would be greater. The effects in terms of heritage are significantly negative as per option 2a. Further development on selected SUEs could have further negative effects with regards to heritage, as several of the sites are adjacent to listed buildings and in the case of Knowle the Conservation Area. The potential for significant negative effects also exists in these locations. Taken together, the cumulative effects for the borough of this option are predicted to be significant.

For Site South of A45 growth, additional growth would occur in this location, making it harder to avoid negative effects on heritage assets. The likelihood of significant negative effects would therefore be higher. This option would also involve further SUEs, which could contribute further negative effects. Overall, this gives rise to potential significant negative effects across the borough.

Option 3c directs further growth to Balsall Common as well as the SUE additions. Similar to Option 3b, this reduces flexibility to avoid negative effects and so significant effects are more likely to occur both at Balsall and overall across the borough.

HMA allowance ++ (19,000 dwellings)

Option 4A would involve all the development sites proposed for 3a but would also include large amounts of development south of A45. Development at several locations is predicted as possibly leading to significant negative effects. There is therefore a possibility that the cumulative effects from a borough wide perspective could be major negative. Given the flexibility at the South A45, this is not a certainty though.

Likewise, option 4b includes growth at both the HS2 / UKCH and Balsall Common, alongside additional SUEs. Potential significant effects could arise at several locations, and therefore the overall cumulative effects could be major. Similar to option 4a, there remains some scope for mitigation, so there are uncertainties involved.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a, 5b and 6 maximise growth across the borough, further increasing potential for significant negative effects with regards to pressure on the historic environment in several locations. There is less flexibility to avoid negative effects at Balsall common and south of the A45 given that growth would be maximied in those locations. At These higher levels of growth, there would also be a need for additional urban extensions in smaller settlements with sensitivities such as Knowle. When combined, these impacts are likely to generate major significant negative effects on the historic environment. This is because all three options would be likely to lead to significant effects in several locations, and the potential for avoidance and mitigation is thought to be lower.

13. Built environment

To deliver improvements in townscape and enhance local distinctiveness.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓?	-	✓✓?	✓✓?	✓?	✓✓?	✓✓?	✓?	✓✓✓?	✓✓? ×	✓✓✓? ×	✓✓? ××	✓✓✓? ××

Overview

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 with the exception of 1b); 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.

Meet needs (13,000 dwellings)

As well as the regeneration opportunities in the existing urban areas, Option 1a offers some potential 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 minor positive effect. Given that he effects will depend upon the quality of development, an element of uncertainty exists.

These potential opportunities are more limited for Option 1b, and so neutral effects are predicted.

HMA allowance (15,000 dwellings)

Option 2a involves the same sites as option 1a, and so there are some benefits in terms of possible townscape enhancements. In addition, it offers 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.

Again, Option 2b 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 Site South of the A45 ought to be attractive as it is a prime location for growth. 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.

Option 2c involves the same sites as for option 1a, and so the minor positive effects involved are also recorded. Additional large scale growth at Balsall Common could potentially be of high quality design. However, a large extension to a predominantly rural area is unlikely to have the positive effects on townscape in terms of gateway locations into the City. Therefore, the positive effects for this option are not as prominent compared to Options 2a and 2b.

HMA allowance + (16,000 dwellings)

All three options under this growth scenario offer the same benefits as the corresponding distribution options under scenario 2 . However, each option involves an additional concentration of growth at the strategic locations, as well as further urban expansion in selected areas. Increased density or expansion ought to be possible at the strategic locations, whilst still maintaining high quality design. Indeed, it could provide additional investment to achieve such outcomes. The additional urban expansion sites are of a smaller scale and are on the edge of smaller settlements such as Dorridge. It is therefore more likely that the individual settlement character could be affected in a negative way rather than positively. The effects are unlikely to be significant though and could be avoided with good design.

HMA allowance ++ (19,000 dwellings)

Option 4a is predicted to have major significant positive effects on the built environment, as it offers enhanced 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, HS2 interchange and A45 ought to be attractive as it is a prime location for business investment. This cluster of development provides the potential to deliver comprehensive growth on a key corridor into Solihull, and there is an opportunity to create a new identity for this gateway location. The benefits in terms of townscape and built environment would be reliant upon layout and design though. Therefore, an element of uncertainty is recorded.

Option 4b is predicted to have a significant 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. However, other elements of growth are guided towards Balsall common, where the implications for settlement identity are less likely to be positive. At the scale of growth proposed, the effects are more likely to be minor negative.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a involves the enhanced opportunities for enhancement at the north of Solihull such as for Option 4a. Therefore, significant positive effects are also recorded. The scale of growth at Balsall common and at some urban expansion sites may be more likely to negatively affect community identity at these smaller settlements. Therefore a minor negative effect is also predicted. For both the positive and negative effects an element of uncertainty exists as the effects are also dependent upon layout and design.

Option 5b involves a much greater level of growth at Balsall common, which would likely be of a scale and density which is more disproportionate to what currently exists. This is a potentially significant negative effect. Significant positive effects associated with growth in urban areas and at the UK Central hub are recorded also.

For Option 6, growth at Balsall common is the same as Option 5b, and the significant negative effects are also recorded. Likewise, the potential for enhancements elsewhere in the borough still exist, which is a major significant positive effect. As with all the other options, there are uncertainties at this strategic scale of plan-making and assessment.

14. Pollution

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓ ×	✓	✓ ×	✓ ×	✓ ×	✓ ×	✓ ×	✓ ×	✓ ××?	××	✓ ××	✓ ×××	✓ ×××

Overview

Although Solihull MBC has not declared an air quality management area so far, the Council is committed to improving air quality in general and will start a new regime of monitoring. Solihull Council has published a Solihull Clean Air Strategy 2019 – 2024. One of the actions of the strategy relates to planning. The built environment can affect the emission of road-traffic-related air pollutants by influencing how, and how frequently, people travel, for example by ensuring good connections to walking and cycling networks.

Birmingham International Airport's Noise Action Plan suggests that residential areas in Birmingham and Solihull to the north of the airfield are most affected by noise. Some properties are overflown as low as 500 feet. To the south of the airfield, concerns about aircraft noise have been reported in Balsall Common, Barston, Bickenhill, Catherine de Barnes, Eastcote, Hampton in Arden and Knowle. Many of these areas are outside of the 2016 LAeq 54dB(A) contour (the level the Government states is the approximate onset of significant community annoyance). Settlements to the east and west of the airport are less affected by overflying aircraft noise, but are impacted by ground noise and by noise from aircraft taking off or landing. Increased residential development in the north may also increase the number of dwellings which are exposed to overhead noise from associated aircraft.

More noise is also likely to be attributed to the HS2 rail line should it be delivered, having an impact on an increased number of residents within Solihull. New technologies and mitigation measures however may offset the potential increase of negative effects.

A Water Cycle Study (2017) for Solihull MBC was produced to set out a strategic overview of the capacity of the existing water and sewerage infrastructures in relation to the planned levels of growth identified within the Borough. The study suggests that overall there are no major issues which indicate that the planned scale, location and timing of planned development within the Borough of Solihull is achievable from the perspective of supplying water and wastewater services and preventing the deterioration of water quality in the receiving watercourses. The study has identified that infrastructure upgrades are expected to be required to accommodate the planned growth.

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 options (Meet Needs) to (Needs +++) would incur increasingly negative effects. However, site location is considered to be influential in the extent of pollution.

Meet needs (13,000 dwellings)

For Option 1a which focuses development around established transport corridors, this option could exacerbate pollution problems in areas which are already suffering (particularly noise and air), which is a negative effect. Growth locations close to major transport corridors and Birmingham Airport and the HS2 railway line may negatively impact on existing pollution problems. Conversely, concentration in these locations could 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 overall.

For Option 1b which focuses development around established transport corridors (but without green belt release), could also exacerbate pollution problems in areas which are already suffering (particularly noise and air), which is a negative effect. However, the extent of growth is low, so effects ought to be minor and possible to mitigate.

Under both approaches (more so for Option 1b), 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 approach when considering Solihull as a whole.

HMA allowance (15,000 dwellings)

Option 2a follows the same distribution as option 1a, but increases overall growth with the addition of development at the UK Central/High Speed 2 Growth Strategy sites. From an air quality perspective, this places a lot of growth in accessible locations in terms of jobs, services and public transport (which is positive). For example, the strategic sites are close to Birmingham Business Park, Birmingham Airport and major road network but also provide the opportunity to ensure that new housing development has excellent access to the UK Central Hub and existing public transport. Therefore, the effects of housing upon air quality ought to be more manageable. Housing in these locations could potentially be affected by existing issues such as noise as it would be close to major transport corridors and Birmingham Airport and the HS2 railway line may. Therefore, the overall picture with regards to pollution is mixed.

As per option 1a, 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 (particularly those with a more rural feel).

Option 2b is predicted to have similar effects to option 2a. It involves the same approach to growth in urban areas and transport routes, but focuses additional growth to the south of the A45. This location is also close to existing employment areas and strategic transport networks, and so ought to reduce the need for car travel (which is positive for air quality). This option also diverts growth away from other rural parts of the borough which have a more rural character, helping to minimise light and noise pollution in such areas.

For both Options 2a and 2b, the scale of growth ought to be possible to accommodate from a water infrastructure perspective, but additional capacity may be required to serve the northern parts of Solihull where growth would be focused.

For option 2c additional growth would be directed towards Balsall Common. From an air quality perspective, this could be negative, as it would be more likely to result in car-reliant housing developments. There would also be potential light pollution issues on urban fringes which are currently more rural in character. At the scale of growth involved though, the effects ought to be possible to mitigate, so they are only minor. In terms of noise, new development would be in locations that are less affected by major infrastructure, but could affect the tranquillity for existing urban fringe communities. It ought to be possible to accommodate increased growth from a water infrastructure perspective, but planning would be needed to ensure that upgrades are in place before significant growth. Overall, minor positive and negative effects are predicted in relation to pollution.

HMA allowance + (16,000 dwellings)

Options 3a, 3b and 3c follow the same distribution as options 2a. 2b and 2c, but with increased growth at the HS2 / A45 / Balsall Common locations respectively (and additional SUEs under all three options). The additional growth at strategic locations is unlikely to be a trigger for significant negative effects. The urban extension sites could have some impacts on amenity as they are urban fringe and therefore noise and light pollution will likely increase for existing residents. New communities would be unlikely to experience notable effects though. The additional growth is spread at several locations, and ought to be possible to accommodate without having negative effects upon water infrastructure and air quality (despite the SUEs likely to lead to car-based travel. The effects therefore remain the same as for options 3a and 3b (minor positive / minor negative).

HMA allowance ++ (19,000 dwellings)

Option 4a takes the same approach to growth as 3a, but to uplift growth it also includes the south of A45 site. The overall scale of growth is increased and much of this is placed into a focused location. From an accessibility point of view, the development is well located, and encourage public transport. Whilst this is positive in terms of air quality, there would also be an overall increase in traffic in this location, which could offset such benefits. There would also be a greater amount of growth in areas that already experience pollution issues such as noise. Expansive development in these areas will likely contribute to this and potentially lead to cumulative significant negative effects. Mitigation measures ought to be possible to implement though, as the scale of sites should allow for flexibility in layout and design. Therefore an element of uncertainty is recorded. Some positive effects still remain as the option still diverts growth away from rural areas that are relatively unaffected by amenity and pollution issues.

Option 4a involves existing local plan sites plus limited Green Belt release and the UKC Hub, Amber Sites and site South of A45. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon pollution could therefore start to become greater. Taking this into account could potentially give rise to significant negative effects.

Option 4b involves existing local plan sites plus limited Green Belt release and UKC Hub, Amber Sites and Balsall Common. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon pollution could therefore start to become greater, particularly at Balsall common in terms of more noise, light and traffic pollution. This is a potential significant negative effect.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Option 5a involves three broad locations as well as urban growth. This option increases the overall scale of growth further still across the borough. The potential for cumulative effects upon pollution could therefore start to become greater. 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. Minor negative effects are likely at Balsall Common, along with potential significant negative effects north of Solihull. This constitutes a significant negative effect overall. The good accessibility afforded by the strategic locations north of Solihull and in the urban areas should see some minor positive effects in terms of air quality though.

Option 5b involves two broad locations but avoids the site south of the A45. The effects at HS2/UKCH are likely to be mixed and minor in nature. However, the very large scale of growth at Balsall could increase pollution significantly in terms of noise, traffic, light and pressure on water infrastructure. This option also increases the overall scale of growth further still across the borough. The potential for cumulative effects upon pollution could therefore start to become greater. Taking this into account this could potentially give rise to **major significant negative effects**.

Option 6 maximises growth across the borough, further increasing potential for significant negative effects with regards to pollution. This is the case at several locations individually such as north of Solihull and at Balsall Common. Taken into account with all other growth and from a borough perspective this is a significant negative effect. Some minor positive effects are still recorded, as the distribution of growth in some areas does support accessibility and shorter trips, which is helpful in terms of air quality across the wider sub-region.

15. Social Inclusion

Reduce social exclusion and disparities within the Borough

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓ x?	✓✓ x?	✓✓✓ xx?

Overview

Although Solihull is broadly affluent, the Borough is relatively polarised in this respect. 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.

Meet needs (13,000 dwellings)

For option 1a, minor positive effects are predicted. Whilst growth is promoted in urban areas, those of greatest need are not focused upon. However, distribution of growth along transport corridors and hubs will help to support those that have no access to a car or prefer to travel by alternative means.

Option 1b is considered to have a neutral impact as more limited opportunities for helping to provide homes and jobs in areas of need are put forward. Whilst additional development is unlikely to widen any inequalities, the opportunities to address disparities would be much reduced too.

HMA allowance (15,000 dwellings)

At this scale of growth, the effects are broadly the same as for option 1a, given that the focus is on urban areas and public transport hubs. However, the addition of a broad location in one of three locations is proposed.

For option 2a, this is at the UK Central Hub HS2 interchange, which as one of the main regeneration opportunities for the borough is likely to generate a more pronounced positive effect. Therefore, moderate positive effects are predicted overall.

Option 2b involves growth south of the A45. Whilst not directly within areas of deprivation or in need of regeneration, there could be links drawn with UKCH and HS2 to the north. This would be dependent upon inclusive and accessible development though, so a question mark is raised at this stage.

Option 2c involves an expansion to Balsall Common, which is unlikely to have any direct positive effects in terms of regeneration given its rural nature (regardless of the precise location). Therefore, the effects remain minor positive overall when considered alongside the growth already proposed in urban areas and along transport hubs.

HMA allowance + (16,000 dwellings)

This set of options involves a slight uplift in growth compared to 2a, 2b, 2c. Several SUEs would be involved for each option, totalling 500 dwellings. These would be largely in non-deprived locations and would have no direct benefit in terms of regeneration. Therefore, the effects are not predicted to be different to options 2a, 2b and 2c in this respect.

Option 3a would involve further growth at HS2 sites, but this would not be likely to top the balance to major significant effects. The overall effects are therefore the same as for option 2a.

Option 3b would involve growth at the A45, at a larger scale compared to option 2b. This too is considered to be a moderate positive effect.

Option 3c would place all additional growth at Balsall common, and for the same reasons as option 2c, this would mean only minor positive effects are generated.

HMA allowance ++ (19,000 dwellings)

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This will likely generate substantial opportunities for housing and employment that is in close proximity to some of the more deprived areas in the borough. Along with the broader focus on urban areas, controlled expansion, and public transport hubs this could create significant positive effects in terms of social inclusion. Should development not be delivered in a way that benefits nearby deprived communities, then there is a possibility that further polarisation would occur though. This puts a question mark over the positive effects. Increased urbanisation could also have amenity impacts on nearby communities. The more likely (and positive) scenario though would be that new development brings associated social improvements such as new services, transport links and accessible open space. The increase in construction in this area would also bring about opportunities for jobs, which potentially could be taken advantage of by residents in areas of need.

Option 4b proposes the same scale of growth, but some of this would be directed to Balsall Common instead of all being north of Solihull. As a consequence, the effects are not predicted to be major.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Similar to Option 4a, option 5a also involves significant growth at the north of Solihull, which constitutes major significant positive effects in terms of social inclusion. Option 5b directs a substantial amount of the additional growth away towards Balsall common instead, so the effects are not majorly positive.

Option 6 involves growth in all locations, and therefore ought to have significant benefits in terms of social inclusion.

However, at higher levels of growth, 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 might also apply across wider parts of the HMA as a very large number of unmet needs from Birmingham would be placed in Solihull on greenfield sites). This could have negative implications in the short term, though a well-planned / phased approach to site release would negate these effects. Therefore, whilst the positive effects are likely to be greater in terms of long-term regeneration and social inclusion; minor negative effects are also recorded for option 5a and significant negative effects for option 5b and 6 which direct 6000 dwellings towards Balsall Common.

16. Housing

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

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓✓	××	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓ ×?	✓✓✓ ×?	✓✓✓ ×?

Meet needs (13,000 dwellings)

There is a clear need to meet housing needs in the borough, particularly addressing issues of affordability. Under growth Option 1a it is likely that local needs will be met for Solihull. The choice and range of sites is varied and there is some flexibility to factor for slower delivery.

However, there could still 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.

Option 1b would not deliver housing needs for the borough and therefore there could be difficulties for local residents to access housing. This would be compounded by demands from Birmingham and could have particularly negative effects in the Solihull area. In the longer term, more speculative developments could arise to help meet growth, but it would be in an uncoordinated manner. Therefore, significant negative effects are predicted.

HMA allowance (15,000 dwellings)

There are substantial housing needs in the North Solihull area (which has close links with Birmingham), which makes Option 2a and 2b likely to tackle needs closer to where they are most pronounced (provided that development promotes market housing in areas of current social housing to facilitate mixing of communities). For option 2a, this is at the UK Central Hub HS2 interchange, which as one of the main regeneration opportunities for the borough is likely to generate a positive effect. Option 2b involves growth south of the A45. Whilst not directly within areas of deprivation or in need of regeneration, there could be links drawn with UKCH and HS2 to the north. Both options involve greater flexibility to meet local needs and to address an element of unmet needs in the wider Birmingham area.

Option 2c involves an expansion to Balsall Common, which would add a higher element of flexibility alongside the proposed urban growth and SUEs. As such, significant positive effects are predicted overall. The location of growth in a more rural location would have less direct positive effects in terms meeting housing needs where they are arising close to Birmingham. Nevertheless, it would be a positive addition in terms of widening choice.

HMA allowance + (16,000 dwellings)

At higher levels of growth under Option 3, local housing needs would be met as well as accounting for additional 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. The additional sites involved include several smaller urban extensions as well as strategic growth locations at either the A45, UKCH or Balsall Common. These would provide greater choice and flexibility and a range of smaller sites in addition to strategic locations. For all three distribution options significant positive effects are predicted. However, those which direct growth to the North Solihull locations are more likely to address housing in areas of greatest need.

HMA allowance ++ (19,000 dwellings)

At the higher growth Option 4, there would be a greater amount of housing needs from Birmingham met. This would contribute to a major significant positive effect for each alternative. Whilst each option would be significantly positive in terms of meeting needs, Option 4a is most favourable, as it includes a greater focus on the UK Central Hub Area / HS2 Interchange and the Site South of the A45 accessible communities (including the north of Solihull). This will likely generate substantial opportunities for housing and employment that is in close proximity to some of the more deprived areas in the borough and is linked to Birmingham. Along with the broader focus on urban areas, controlled expansion, and public transport hubs this could create significant positive effects in terms of housing.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

At the higher growth Options 5a - 6, there would be a substantial amount of housing needs from Birmingham met. This would contribute to a major significant positive effect for each alternative regardless of distribution. However, similar to Option 4a, option 5a and 6 involve significant growth at the north of Solihull, which constitutes significant positive effects in terms of regeneration.

However, at higher levels of growth, 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 might also apply across wider parts of the HMA as a very large number of unmet needs from Birmingham would be placed in Solihull on greenfield sites). This could have negative implications in the short term, though a well planned / phased approach to site release would negate these effects. Therefore, whilst the positive effects are likely to be greater in terms of long term regeneration; minor negative effects are also recorded for options 5a 5b and 6.

17. Health

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.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓	-	✓✓?	✓✓?	✓ ✗?	✓✓ ✗?	✓✓ ✗?	✓ ✗?	✓✓✓ ✗?	✓✓ ✗?	✓✓✓ ✗?	✓✓ ✗?	✓✓✓ ✗✗?

Overview

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.

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. Conversely, development that leads to the loss of important community facilities, increased pressure on services and facilities, or increased pollution could have the opposite effect by leading to greater inequalities.

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.

Meet needs (13,000 dwellings)

Option 1a ought to have some benefits for existing and new communities by focusing growth in around established transport corridors and the urban areas. This would be 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. The majority of growth is located in areas with relatively low deprivation, and so the benefits in this respect are likely to be limited. Though some growth at urban fringes may not be welcomed by certain communities, the overall effects in terms of health and wellbeing are unlikely to be significantly negative or permanent. The scale of growth involved is in-line with housing needs for Solihull, and so there should be positive effects that growth brings in terms of affordable housing.

This option would not meet additional housing needs from Birmingham, and so demand for housing in the urban parts of Solihull could remain high. Therefore, the positive effects are not predicted to be significant.

For Option 1b, no greenbelt sites would be involved, and so negative effects upon communities in terms of amenity and wellbeing would be largely avoided. However, the benefits of growth in terms of affordable housing, and developer contributions towards infrastructure improvements would be much lower. As a consequence, neutral effects are predicted.

HMA allowance (15,000 dwellings)

For option 2a, the distribution of growth builds upon option 1a, but with the addition of development at the UK Central Hub HS2 interchange. As one of the main regeneration opportunities for the borough, and in an area that is accessible to the most deprived communities, this is likely to generate a more pronounced positive effect. The option 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). Therefore, whilst a significant positive effect is predicted, there are uncertainties.

Option 2b involves growth south of the A45. Whilst not directly within areas of deprivation or in need of regeneration, there could be links drawn with UKCH and HS2 to the north. This would be dependent upon inclusive and accessible development though, so a question mark is raised at this stage. Nevertheless, the potential for significant positive effects exists in terms of health and wellbeing.

Option 2c involves an expansion to Balsall Common, which is unlikely to have any direct positive effects in terms of health given its rural nature and the generally good health of nearby communities (regardless of the precise location). Therefore, the effects remain **minor positive** overall when considered alongside the growth already proposed in urban areas and along transport hubs. The large scale of growth in this strategic location could concern some members of the community though, especially if it leads to a loss of amenity, and affects existing recreation opportunities. The strategic nature of the site should allow for enhancement measures to implemented though.

<u>HMA allowance + (16,000 dwellings)</u>

Option 3a, 3b and 3c are predicted to have similar positive effects to the corresponding options 2a, 2b and 2c. The additional growth would be split between additional urban extensions and more growth at each of the strategic locations. This could lead to enhanced positive effects, but for the SUEs, and at Balsall, these are locations that have broadly good indicators of health. The loss of more greenbelt land could generate negative effects with regards to the wellbeing of nearby residents in particular. A higher scale of growth overall could also put greater pressure on public services such as schools and healthcare in the short term. As a result minor negative effects are predicted for each option.

The slightly higher growth at the HS2/UKCH and A45 locations ought to further tackle housing needs arising in the Birmingham area, which contributes to significant positive effects upon health and wellbeing for communities that benefit (for options 3a and 3b).

Option 3c would place all additional growth at Balsall common, which is unlikely to have any direct positive effects in terms of health given its rural nature (regardless of the precise location). Therefore, the effects remain **minor positive** overall when considered alongside the growth already proposed in urban areas, along transport hubs and at the SUEs.

<u>HMA allowance ++ (19,000 dwellings)</u>

Option 4a and 4b is predicted to have positive effects, as the level of growth would meet even more housing needs from the Birmingham area. This could mean that demand for housing in the urban parts of Solihull would be less high; having indirect benefits in terms of health.

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This will likely generate substantial opportunities for housing and employment that is in close proximity to some of the more deprived areas in the borough. Along with the broader focus on urban areas, controlled expansion, and public transport hubs this could create major significant positive effects in terms of health. The scale of growth involved in the north Solihull area could potentially support new healthcare facilities schools and green infrastructure to service new and existing communities nearby. However, a comprehensive approach to development in this location would need to be taken to ensure that benefits were secured at the right time and for the people in most need.

Option 4b proposes the same scale of growth, but some of this would be directed to Balsall Common instead of all being north of Solihull. This location is likely to be less beneficial with regards to addressing health and

wellbeing issues. It could also have impacts for existing communities in terms of wellbeing by affecting amenity. Conversely, higher levels of growth may provide potential for new facilities to be supported, which would have positive effects for rural communities. Overall, mixed effects are predicted, with significant positives and potential minor negatives.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

Options 5a,5b and 6 are predicted to have significant positive effects, as the level of growth would meet a large amount of housing needs from the Birmingham area. This could mean that demand for housing in the urban parts of Solihull would be less high, and communities have better access to jobs and services. Option5a and 6 both involve two strategic locations to the north of Solihull, which would be more likely to have effects for communities of need. Therefore, major significant effects are possible.

A very large amount of growth at Balsall (under option 5b and 6) places a lot of growth in areas that perform relatively well in terms of health indicators. Therefore, whilst positive effects could be generated in terms of new homes and social infrastructure, the benefits would not be expected to address areas of greatest need. The economies of scale involved though ought to support new health care and school facilities, which would be very beneficial for new communities.

However, at higher levels of growth, 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 might also apply across wider parts of the HMA as a very large number of unmet needs from Birmingham would be placed in Solihull on greenfield sites). This could have negative implications in the short term, though a well-planned / phased approach to site release would negate these effects. Therefore, whilst the positive effects are likely to be greater in terms of long-term health and well-being. The level of growth could cumulatively undermine services and facilities.

18. Crime

Reduce crime, fear of crime and anti-social behaviour

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓ ×?	×	✓ ×?	✓ ×?	✓ ×?	✓ ×?	✓ ×?	✓ ×?	✓✓? ×?	✓ ×?	✓✓? ×	✓ ×	✓✓? ×

Overview

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. There are a multitude of factors that can affect the propensity for criminal behaviour, one of which is access to a job and sufficient accommodation. Therefore, some indirect links can be drawn between these factors. Likewise, diversionary activities such as recreation, community groups and other protective factors can reduce criminal and anti-social behaviour. Whilst these are not purely planning issues, the built and natural environment contribute to these factors.

Meet needs (13,000 dwellings)

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 typically used by offenders. In this respect all of the options could have potentially negative effects. However, design measures could mitigate such opportunities, and the impact pathway is not direct. Therefore, uncertainties exist.

The provision of homes can have direct positive effects in terms of offending, and therefore, a minor indirect positive effect is recorded for all options that meet needs. For option 1b, which does not fully meet housing needs, a potential negative effect arises instead.

HMA allowance (15,000 dwellings)

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, Option 2a and 2b ought to provide the potential for further positive effects as they seek to support growth in accessible locations which should benefit deprived communities. It is not possible to say with great certainty whether the effects would be significant or not, so only minor positive effects are recorded. Option 2c would not create the same opportunities for positive effects, but minor positive effects are still recorded to reflect the wider growth proposed in the urban areas which is common to all options.

HMA allowance + (16,000 dwellings)

The additional growth involved for each of these options (compared to options 2a, 2b and 2c) is unlikely to be of a scale where significant effects could confidently be predicted. Therefore, the effects are the same (i.e. minor positive effects alongside potential minor negative effects).

HMA allowance ++ (19,000 dwellings)
HMA allowance +++ (22,000 dwellings / 25,000

For the reasons outlined for lower growth options both positive and negative effects are predicted for all of the higher growth options.

However, the higher scales of growth could perhaps support increased jobs, housing and social infrastructure, which might benefit certain people who might otherwise take a criminal path. This is particularly the case for options that involve substantial growth in the North Solihull areas, and could potentially have significant benefits. There is uncertainty whether such effects would come to fruition though, as many other factors will play a part. Nevertheless, where growth is maximised at the UKCH/ HS2 and South of A45, potential significant positive effects are predicted. This is Options 4a, 5a and 6.

There is some evidence that suggests rates of crime and anti-social behaviour can be greater where there are higher numbers of temporary workers / visitors to an area associated with construction. An indirect link could therefore be made between the high growth options and greater possibility of community safety issues arising. Therefore, minor negative effects are predicted for options 5a, 5b and 6 (alongside the positives that could be felt elsewhere).

19. Accessibility

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.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 dwellings
Option	*1a*	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
	✓✓	✓✓?	✓✓✓?	✓✓	✓✓ ×	✓✓✓?	✓✓	✓✓ ×	✓✓✓	✓✓ ×	✓✓✓ ×	✓✓✓ ××	✓✓✓ ××

Overview

The 2011 census that there are around 50,000 people who come into the Borough each day to work, representing approximately 50% of jobs in Solihull being taken up by people travelling in from elsewhere. In addition, around 60% of Solihull commuters travel out of the Borough for work each day. It is estimated that that if the current patterns continue, then in 20 years there could be as many as 120,000 people travelling in and out of the Borough each day for work, making 240,000 trips; of which 164,000 will be by car[4].

The use of private vehicles to travel to work is far more common in Solihull than across England as a whole, with public transport, walking and cycling less common. 73% of 16-74 year olds in employment travel to work by private vehicle in Solihull compared to the England average of 63%, while 14% use public transport compared to 17% and 8% walk or go by bike compared to 14%[5].

The Borough of Solihull is located to the east of the West Midlands Conurbation, and is bordered by the administration areas of Birmingham City Council, Warwickshire County Council, Worcestershire County Council and Coventry City Council. Solihull is positioned centrally to the national rail and motorway network, with direct rail services to London. Access to other regions in the UK can be achieved through the M42, which links the Borough to the M6 in the north and the M40 in the south.

Changes from Census Data between 1981 and 2011 highlight that the overall use of public transport has steadily declined within the Borough, whilst the used of car, especially between 2001 and 2011, has increased. This is against national trends which have seen a decline in car used over the same period.

[4] Solihull Connected Transport Strategy 2016 https://www.solihull.gov.uk/Portals/0/ParkingTravelRoads/Solihull_Connected_2016_1.5.pdf, Accessed: 24/06/20

[5] ONS Census 2011, Accessed: 24/06/20

Solihull rail station is located approximately 1.0km to the west of Solihull town centre, on the Chiltern line to London. Located on the periphery, there is poor connectivity to the centre, due largely to the presence of major roads and junctions which reduce permeability, and poor legibility.

There are frequent rail services to and from Birmingham at both peak and off-peak hours from Solihull Station. Approximately 1.6 million passengers use Solihull Station each year, equating to 2,500 per day[6]. This figure reflects annual growth of 16.5% in the period since 2011/2012. Applying longer term growth forecasts, a 49% passenger volume growth the 2023 and 114% growth to 2043 is predicted, without taking into consideration the potential increase of other stations within the Borough.

A new interchange station to serve the proposed HS2 line is due to be developed within Solihull (UK Central Solihull Station). This transport opportunity would increase the accessibility of Solihull from the north and the south, and would make the Borough a more attractive location for businesses and residents. It may also help to create jobs and regenerate the currently deprived northern wards of the Borough.

As the local population grows, and until alternative infrastructure is invested in, journeys to work within the Borough by private vehicles are likely to increase in the short and medium term.

The Solihull Connected Strategy sets out a long-term strategic vision offering how to manage the extra travel demand from future economic and population growth. Along with the West Midlands Strategic Transport Plan 'Movement for Growth'[7], the Solihull Connected Strategy will help to prepare the Borough for the arrival of the HS2 Interchange, and is likely to help counteract the potentially negative effects on the local transport network. The Strategies are also likely to encourage more sustainable and alternative forms of transport, and there might be an increase in these modes of travel as a result.

Accessibility across the Borough, especially to/from the northern wards, and between the urban and rural areas, will need to be addressed in order to overcome disparities and to remove potential barriers to work.

Solihull Connected Transport Strategy 2016[8] – What we Know Summary Table

Sub Areas	% of Solihull Population	Existing Jobs and Estimated Job Growth 2031	Notes
North Solihull	57,361 28%	Existing - 22,604 excl. NEC and Airport Estimated - 8,000	Commuters from this area travel the least distance of all the areas in the Borough.
Urban Core	100,561 49%	Existing - 44,443 including Jaguar Land Rover Estimated - 6,000	Almost 40% of commuters who live here travel out of the Borough into Birmingham each day; with around a third of those going to Birmingham city centre. 50% of jobs in the area are taken up by people who do not live in the area. Rail trips are highest in this area.

[6] Solihull Town Centre Masterplan, Available: http://www.solihull.gov.uk/Portals/0/Users/045/45/45/Chapter_3_-_Spatial_Audit.pdf , Accessed: 24/06/20

[7] West Midlands Strategic Transport Plan, 2016, Available: https://westmidlandscombinedauthority.org.uk/media/1178/2016-06-01-mfg-full-document_wmca.pdf Accessed: 24/06/20

[8] Solihull Connected Transport Strategy 2016 https://www.solihull.gov.uk/Portals/0/ParkingTravelRoads/Solihull_Connected_2016_1.5.pdf, Accessed: 24/06/20

			There are some high frequency bus services in the area. These are predominantly focused at getting people in/out of the Solihull town centre and towards Birmingham city centre
Rural East	14,448 7%	Existing - 6,327 Estimated – Very limited	Just 5% of Solihull commuters come from this area. The area has both one of the highest proportions of long distance trip making and yet also the highest proportion of trips less than a mile' to 'under a mile'. Residents make approximately 70% of all their daily trips by car; with the average across the Borough being 50%. Public transport options in the area are limited, due to very low population densities meaning that high frequency commercial services are generally not viable but, although some demand responsive services do exist.
Southern Fringe	28,164 14%	Existing - 10,305 Estimated - 6,600	People from this area travel on average to get to work 14km. The Blythe Valley Business Park is particularly poorly connected to Solihull, with just 13% of Solihull residents able to access it within a half an hour by public transport.
Solihull Town Centre	1,177 0.6%	Existing - 14,520 Estimated – 1,200	57% of the population of Solihull live within 30mins by public transport of the town centre. The equivalent figure for Birmingham city centre is 75%. Despite the town centre being the most accessible place in the Borough for public transport, still 79% of people arriving do so by car. This is the second highest of all in the West Midlands.
Birmingham Airport/NEC/HS2 Interchange	-	Existing – 10,000 Estimated – 10,000 with HS2	It is one of the most strategically connected locations in the whole of the UK. It lies at the junction of the M6 and M42, has Birmingham International Station on the West Coast Main Line, the prospect of HS2 arriving in 2026 and the airport connects the area to the rest of the world. 74% of people commuting to the area do so by car. Just 24% of people accessing jobs in the area live in Solihull itself and the average distance travelled to get to work in this area is 17.6 km 24%

<u>Meet needs (13,000 dwellings)</u>

Options 1a and 1b would locate development within urban area in locations that are 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. There are some urban fringe sites that are not as well connected, but overall, a significant positive effect is likely given the focus of growth in accessible places.

For option 1b, there would be less growth in fringe locations, which means that there accessibility ought to be good for most development. However, housing needs would not be met in full, meaning that some people may need to move outside the borough. There might also be more speculative development in the longer term, that might not necessarily be in accessible locations. This leaves a question mark over the positive effects.

HMA allowance (15,000 dwellings)

For option 2a, the effects identified for option 1a remain relevant as the same growth locations are involved in the main. The exception is the addition of growth at the UK Central Hub HS2 interchange, which is one of the main regeneration opportunities for the borough and one of the most strategically connected locations in the country. This ensures that additional growth in the borough is located in an area with 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. As a consequence, significant positive effects are predicted. These could possibly be major given that it draws people away from less accessible locations and into a very accessible area.

Option 2b involves growth south of the A45. Which is fairly well related to Birmingham Airport/NEC/HS2 Interchange and Solihull Town Centre. This would be dependent upon delivering an inclusive and accessible development though, so a question mark is raised at this stage. The overall effects are still likely to be significantly positive as the other growth locations in the borough also have broadly good accessibility.

Option 2c involves an expansion to Balsall Common, which is unlikely to have any direct positive effects in terms of accessibility given its rural nature (regardless of the precise location). There are limited existing jobs or estimated future jobs in this rural location. There would still be well located growth in the urban areas, and along transport hubs, which constitutes significant positive effects here. However, a minor negative effect is predicted to reflect the relatively poor performance of Balsall Common from an accessibility point of view. This would mean that a proportion of housing in the greater Birmingham area would be located in less accessible locations compared to options 2a (in particular) and 2b.

HMA allowance + (16,000 dwellings)

This set of options involves a slight uplift in growth compared to 2a, 2b, 2c. Several SUEs would be involved for each option, totalling only 500 dwellings. Though the locations involved are at the urban fringes, there is some connection to public transport and local services. Therefore, the effects are not predicted to be different to options 2a, 2b and 2c.

Option 3a would involve further growth at HS2 sites. The additional 500 dwellings in this location is not considered certain to tip the balance towards major effects occurring though. Therefore, some uncertainty remains.

Option 3b would involve growth at the A45, at a larger scale compared to option 2b. This too is considered to be a significant positive effect.

Option 3c would place all additional growth at Balsall common, and for the same reasons as option 2c, this would mean that minor negative effects are generated alongside the positives.

HMA allowance ++ (19,000 dwellings)

Option 4a proposes large scale growth to the north of Solihull at both the UKCH / HS2 and south of the A45. This will likely generate substantial opportunities for housing and employment that is in close proximity to some of the major employment areas of the Borough, the town centre and other services. This approach would ensure that a large proportion of needs across the Birmingham area would be met in an area with excellent accessibility. For this reason, major significant positive effects are predicted.

Option 4b proposes the same scale of growth, but some of this would be directed to Balsall Common instead of all being north of Solihull. As a consequence, mixed effects are predicted.

HMA allowance +++ (22,000 dwellings / 25,000 dwellings)

For Option 5a, 5B and 6, these higher levels of growth are more associated with unmet housing need of the Birmingham and Black Country conurbation. At this level of growth, the potential for significant increases in the level of commuting into Birmingham and Black Country conurbation exists. Therefore, locations with better strategic access are more favourable. For this reason, the UKCH/HS2 site and south of A45 are more favourable in terms of accessibility. Options that involve growth in these two locations are predicted to have major significant positive effects. However, where there is a large amount of growth at Balsall, significant negative effects are also identified.

	13,000 dwellings		15,000 dwellings			16,000 dwellings			19,000 dwellings		22,000 dwellings		25,000 Dwellings
	1a	*1b*	*2a*	*2b*	*2c*	*3a*	*3b*	*3c*	*4a*	*4b*	*5a*	*5b*	*6*
1. Regeneration	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓✗?	✓✓✗?	✓✓✓✗✗?
2. Employment	✓✓	-	✓✓	✓✓	✓✓?	✓✓	✓✓	✓✓?	✓✓✓	✓✓✗	✓✓✓✗	✓✓✗✗	✓✓✓✗✗
3. Transport and infrastructure	✓	✓✓	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗✗	✓ ✗✗	✓ ✗✗✗?
4. Resource efficiency	-	✓	-	-	-	✗	✗	✗	✗✗	✗✗	✗✗✗	✗✗✗	✗✗✗
5. Greenhouse gases	-	-	?	-	-	?	-	-	? ✗	? ✗	? ✗✗	? ✗✗	? ✗✗
6. Business resilience to climate change	?	?	?	?	?	?	?	?	?	?	?	?	?
7. Flooding	-	-	?	?	?	?	?	?	✗?	✗	✗?	✗?	✗?
8. Climate change adaptation	-	-	-	-	-	-	-	-	✗?	✗?	✗?	✗?	✗?
9. Biodiversity	✗	-	✓?	✗✗	-	✓?	✗✗	-	✓?✗✗	✓?	✓?✗✗✗?	✓? ✗	✓? ✗✗✗
10. Landscape	✗	✓?	✗	✗	✗	✗	✗	✗	✗✗	✗	✗✗	✗✗	✗✗✗
11. Green Infrastructure	✓✗	-	✓ ✗	✓✗	✓✗	✓✗	✓✗	✓✗	✓✓?✗✗?	✓? ✗?	✓✓?✗✗?	✓✓? ✗✗?	✓✓? ✗✗?
12. Historic Environment	✗	-?	✗✗	✗✗?	✗	✗✗	✗✗	✗✗	✗✗?	✗✗?	✗✗✗	✗✗✗	✗✗✗
13. Built environment	✓?	-	✓✓?	✓✓?	✓?	✓✓?	✓✓?	✓?	✓✓✓?	✓✓?✗	✓✓✓?✗	✓✓?✗✗	✓✓✓?✗✗
14. Pollution	✓✗	✓	✓✗	✓✗	✓✗	✓✗	✓✗	✓✗	✓✗✗?	✓✗✗	✓✗✗	✓✗✗✗	✓✗✗✗
15. Social inclusion	✓	-	✓✓	✓✓?	✓	✓✓	✓✓	✓	✓✓✓	✓✓	✓✓✓✗?	✓✓ ✗?	✓✓✓✗✗?
16.Housing	✓✓	✗✗	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓✗?	✓✓✓✗?	✓✓✓✗?
17.Health	✓	-	✓✓?	✓✓?	✓ ✗?	✓✓ ✗?	✓✓ ✗?	✓ ✗?	✓✓✓✗?	✓✓ ✗?	✓✓✓ ✗?	✓✓ ✗?	✓✓✓ ✗✗?
18. Crime	✓ ✗?	✗	✓ ✗?	✓ ✗?	✓ ✗?	✓ ✗?	✓ ✗?	✓ ✗?	✓✓? ✗?	✓ ✗?	✓✓? ✗	✓ ✗	✓✓? ✗
19. Accessibility	✓✓	✓✓?	✓✓✓?	✓✓	✓✓ ✗	✓✓✓?	✓✓	✓✓ ✗	✓✓✓	✓✓ ✗	✓✓✓✗	✓✓✓✗✗	✓✓✓✗✗

Appendix E: Site proformas

Separate document prepared