

# **Charnwood Local Plan**

**Sustainability Appraisal:**

**Housing and employment  
strategy**

**Interim SA Report**

**April 2018**

<b>Project Role</b>	<b>Name</b>	<b>Position</b>	<b>Actions Summary</b>	<b>Date</b>
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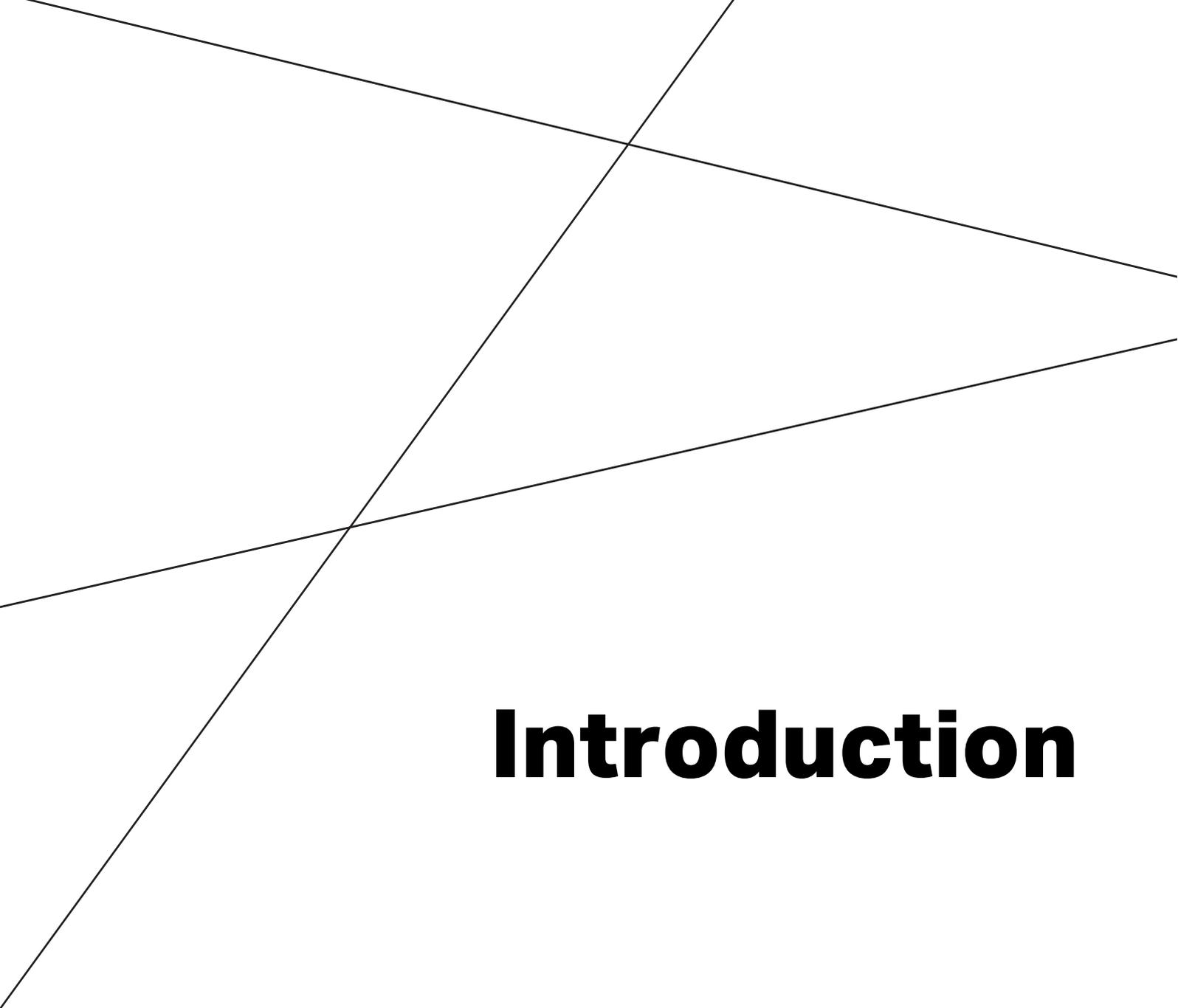
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**Appendix A: Breakdown of reasonable alternatives for housing**

**Appendix B: Appraisal of housing alternatives**

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# **Introduction**

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# 1 INTRODUCTION

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## 1.1 Background

- 1.1.1 AECOM has been commissioned by Charnwood Borough Council to undertake a sustainability appraisal (SA) in support of the new Local Plan (the 'Plan').
- 1.1.2 The new Plan will be a single plan (rather than multiple documents) that covers a longer time period; reflecting government guidance.
- 1.1.3 The new Plan is being prepared in the context of new evidence (e.g. the Leicester and Leicestershire Housing and Employment Needs Assessment), an emerging Strategic Growth Plan for Leicester and Leicestershire and changes to government policy approaches to affordable and brownfield housing.
- 1.1.4 The starting point for the Plan was to identify whether the issues set out within the Adopted Core Strategy remained relevant and whether there were new issues to consider. Consequently, the Council has already undertaken initial work to identify the key issues and scope of the new local plan; and have invited feedback from key stakeholders on the scope of the Plan as part of a Regulation 18 Consultation in July 2016.
- 1.1.5 Following on from this consultation, the Council is now in the process of considering the different options for meeting its development needs up to 2036, and as such has commissioned a number of supporting studies. The SA is one such piece of evidence and will help to inform the preferred approach to the Plan.
- 1.1.6 This Interim Sustainability Appraisal Report accompanies the Charnwood Borough Council's consultation document "Towards a Local Plan for Charnwood". It represents the first step in a process where the borough identifies the way in which it will accommodate its need for homes and jobs. There will be further sustainability appraisal work as the borough moves forward and identifies its preferred development strategy. The interim SA Report presents findings of the SA tasks undertaken at this point in time, including:
- A summary of the SA scope and methodologies.
  - Consideration and appraisal of alternative approaches to the key issues of housing and employment growth and distribution.
- 1.1.7 It should be noted that this interim SA Report does not constitute an 'SA Report' as defined by the SEA Regulations (*i.e. the SA Report that should be prepared and consulted upon alongside the draft Local Plan at Regulation 19 stage of the Planning Regulations*). Rather, this interim SA report documents the current stages of SA that have been undertaken to help influence the plan-making process. It is not a legal obligation to consult upon interim SA findings, but it is helpful to aid in decision making, as well as achieving effective and transparent consultation.

## 1.2 Overview of the plan area

- 1.2.1 Charnwood is one of seven Leicestershire districts located around the city of Leicester (which form the Leicester and Leicestershire Housing Market Area).
- 1.2.2 As illustrated on figure 1.1 below, Charnwood (demarked by a red boundary) directly borders Leicester to the south, whilst Nottingham and Derby are within relatively close proximity to the north and provide sources of employment.
- 1.2.3 The borough is well connected with access to both the M1 motorway to the west and East Midlands Railway Line to the east. Given its strong links with key centres of population, and cross border features such as the Charnwood Forest, there is a need to consider the Plan in its wider context.
- 1.2.4 Like many parts of the UK, there is pressure for housing development to support a growing, aging and changing demographic.
- 1.2.5 Charnwood's main centre is Loughborough, which is home to a renowned university and is a key location for economic growth. A range of smaller settlements are dotted across the Borough, with several service centres dotted along the Soar Valley along the A6. A larger number of smaller settlements are located within the plan area, with relatively large areas of countryside.
- 1.2.6 The Charnwood Forest is a key natural feature within the Borough which forms part of the larger National Forest than runs across North West Leicestershire.

*Figure 1.1 - The Local Plan area*



### 1.3 Overview of the new Local Plan

- 1.3.1 The new Local Plan will set out the amount and the location of new housing and employment development to meet its assessed need for development, and core policies to support the spatial strategy and ensure sustainable growth.
- 1.3.2 There is a vision and strategic objectives already established for the Adopted Charnwood Local Plan Core Strategy (2011-2028). However, the new Local Plan will have a new vision and objectives to reflect the latest issues and evidence.
- 1.3.3 The new vision and objectives have not yet been finalised; but are expected to build upon the existing vision and objectives and progress made on the Core Strategy so far.
- 1.3.4 The existing vision is set out below for context:

#### *The Core Strategy Vision for Charnwood 2028*

*In 2028 Charnwood will be one of the most desirable place to live, work and visit in the East Midlands. Development will have been managed to improve the economy, quality of life and the environment. Charnwood will be recognised for the role Loughborough plays in the region's knowledge-based economy.*

*Our strong and diverse economy will provide more employment opportunities for local people including higher skilled, better paid jobs in high technology research and manufacturing, sports, tourism, creative and cultural industry clusters. Growing business will have been retained and new investment secured.*

*The Loughborough Science and Enterprise Park and growing Loughborough University will be at the heart of Loughborough's brand as a 'centre for excellence'. Business and technological links with the City of Leicester will have been strengthened through the Watermead Regeneration Corridor.*

*Our landscape and the special buildings, heritage and ecology it contains will be in a good state. Our picturesque villages will have retained their strong sense of identity.*

*Our community will have access to a range of green spaces, leisure and recreational facilities across Charnwood and new parkland in Loughborough and Thurmaston will be provided. The Charnwood Forest will be recognised as a Regional Park.*

*The River Soar and Wreake will be improved for wildlife and people.*

*Charnwood will be recognised for delivering growth to a high design quality that benefits the community.*

*The demand for housing will be focused on Loughborough and the edge of Leicester City. New sustainable urban extensions at West Loughborough and Thurmaston, as well as other planned areas of growth, will incorporate good quality design and reflect our strong local distinctiveness. Our community will have access to homes to suit their needs. In particular, there will be a good provision of affordable housing particularly in rural communities.*

*Issues previously associated with houses in multiple occupation will have been managed and social cohesion will have improved.*

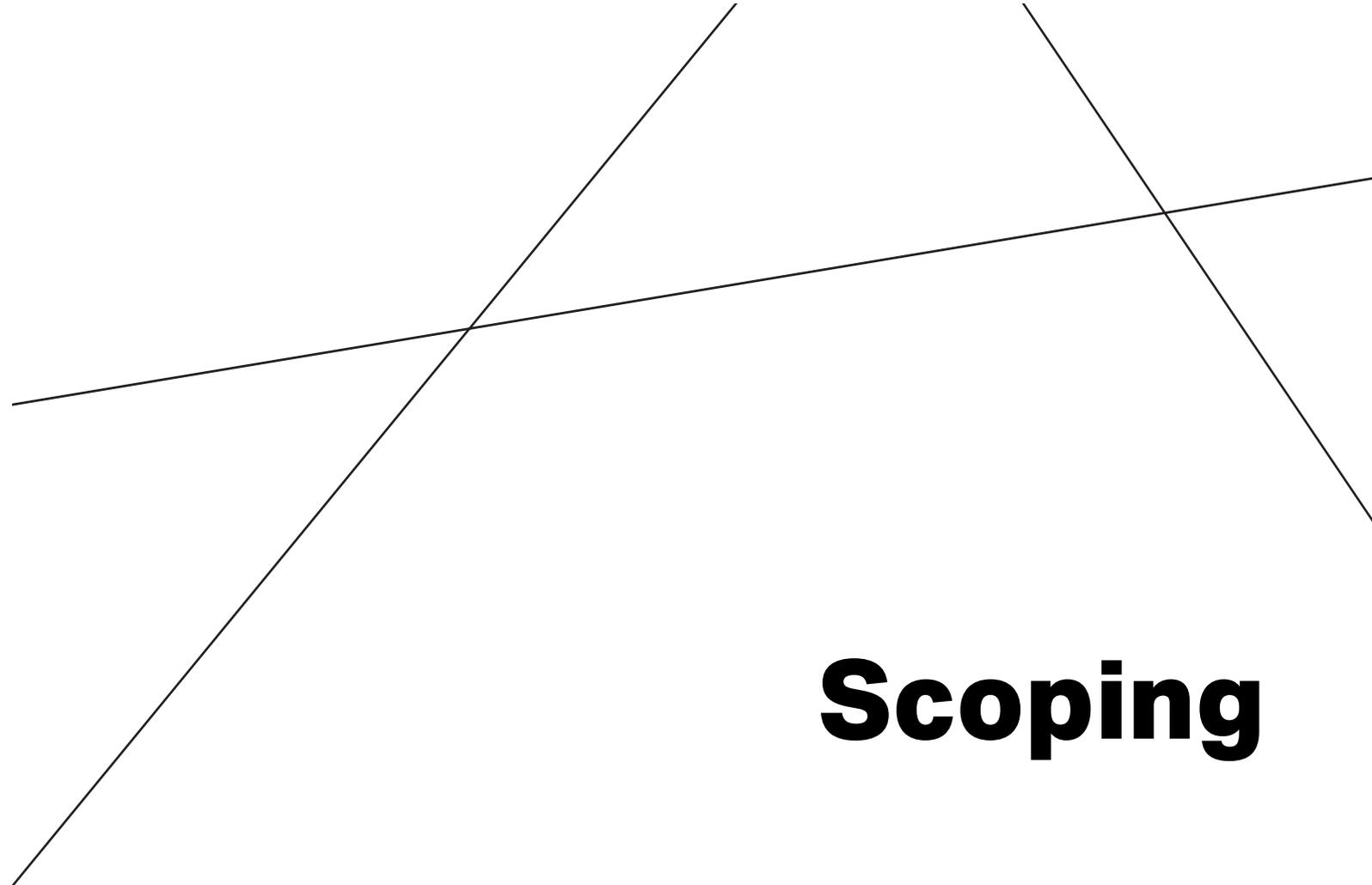
*Loughborough will continue to be the main economic, social and cultural heart of the Borough. It will be an attractive, compact and 'walkable' destination for shopping, leisure, entertainment and culture.*

*Our other settlements, including a regenerated Shepshed, will have an attractive provision of local shops, culture and leisure facilities.*

*Our community will have better access to jobs and services, with a choice to walk or cycle. For longer trips Charnwood will be known for its excellent connections by bus or rail, including a restored Great Central Railway. Some trips will no longer be necessary as an expansive broadband network will make Charnwood one of the best connected semi-rural boroughs in the country.*

*Our community will enjoy a cleaner and greener environment. Charnwood will be well prepared for the impacts of climate change and will be playing its part in reducing greenhouse gas emissions.*

*Our community will have a sense of ownership and increased pride in their local areas due to strong neighbourhood planning.*

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# Scoping

**02**

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## 2 SCOPING

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### 2.1 Background

- 2.1.1 The Scoping stage of the SA process is used to establish the key issues that should be the focus of the appraisal, as well as the assessment methodologies.
- 2.1.2 A Scoping Report was prepared and published for consultation in January 2017. Following consideration of the comments received, the scope of the SA has been determined and has provided the baseline position against which appraisals have been undertaken.
- 2.1.3 It should be noted that the scope of the SA is fluid and will be updated throughout the plan making process in light of new evidence. The scope of the SA will be presented in full within the final SA Report (representing an update to the Scoping Report).

### 2.2 Key issues

- 2.2.1 The key issues identified through the scoping process so far are summarised in table 2.1 below.

*Table 2.1: Key sustainability issues identified through scoping*

#### Landscape Character

- Pressure on landscape character and condition from habitat fragmentation, urban intrusion and commercial agriculture intensification in several LCAs.
- Maintaining settlement and landscape identity caused by pressure on open land between settlements particularly within the Soar and Wreake valleys.
- The amount of area of relative tranquillity within Charnwood is declining. There is a lack of tranquillity surrounding Loughborough, Shepshed, Leicester, the Soar Valley and the M1 corridor.
- Infrastructure and development are creating barriers within the Borough, particularly restricting movement between east to west.
- There is a large-scale programme of afforestation in the National Forest area of the Borough, which contributes to LCA objectives for Charnwood Forest.

#### Biodiversity and Nature Conservation

- Loss and fragmentation of habitats, leading to potential harm to species due to development pressure.
- Condition of many designated sites (SSSIs) is unfavourable.
- Important habitats and species in the Borough are vulnerable to the effects of climate change.
- The Soar Valley and Charnwood Forest are important areas for nature conservation.

*Table 2.1: Key sustainability issues identified through scoping*

### **Water Environment**

- The ecological quality of the Borough's watercourses is generally low, with several watercourses failing to meet WFD objectives.
- Water resources in the Borough experience a moderate level of stress. The regional water resources strategy aims to reduce water demand and improve water usage, reducing the impact of water abstraction on the water environment.
- The Borough provides public water supply storage for other areas in the region.
- There is some pressure on water resources from the quarrying and aggregate industries and agriculture.
- Future development may place pressure on existing water treatment facilities requiring upgrade or expansion of treatment systems to ensure no detriment to the quality of receiving watercourses.
- The rivers Soar and Wreake are the principal sources of flooding in the Borough.
- Climate change is likely to cause a significant increase in flood risk.
- Flooding has the potential to mobilise contaminants in the Borough.
- There are a relatively limited number of sustainable drainage (SuDS) schemes in the Borough.

### **Land**

- The Borough has a variety of important geological sites.
- Good quality agricultural land is at risk from development.
- Modern agricultural practices are leading to increased soil erosion.
- There are a number of contaminated sites within the Borough, with a cluster of historic landfills in the Soar Valley.

### **Historic Environment**

- There are a significant number of heritage assets in the Borough that need to be preserved.
- There are a number of heritage assets at risk, several of which do not have a plan in place to provide protection and restoration.
- Heritage assets not legally protected are at risk from development.
- Development may adversely affect the setting of heritage assets.

*Table 2.1: Key sustainability issues identified through scoping*

<p><b>Air Quality</b></p> <ul style="list-style-type: none"><li>• Loughborough, Syston and Mountsorrel suffer from poor air quality.</li><li>• Increased congestion could lead to a degradation in air quality of the Borough.</li></ul>
<p><b>Climate</b></p> <ul style="list-style-type: none"><li>• The Borough is predicted to have increased summer temperatures, decreased summer rainfall, increased winter rainfall and increased frequency of severe weather events.</li><li>• Increased rainfall and severe weather events increase the flood risk.</li><li>• Biodiversity may be negatively impacted by climate change, particularly along the Borough's watercourses.</li><li>• There is significant potential for renewable energy generation in the Borough.</li><li>• There is increased risk to public health due to increased summer temperatures and increased flood risk.</li><li>• Increased population and increased development may increase the Borough's greenhouse gas emissions.</li></ul>
<p><b>Population</b></p> <ul style="list-style-type: none"><li>• The population of the Borough is increasing and Charnwood has a very high population density. This is increasing pressure on community services and facilities, and housing provision in the Borough.</li><li>• High student population in Loughborough places pressure on the town and its permanent residents.</li><li>• Educational attainment levels in the Borough are slightly lower than the national average.</li><li>• There are pockets of deprivation, with five of Leicestershire's 10 most deprived areas within the Borough.</li><li>• Crime and community safety is a cause of concern for the local population.</li><li>• Domestic abuse incidents have increased in the Borough.</li><li>• The Borough has the highest NEET rate in Leicestershire.</li></ul>
<p><b>Human Health</b></p> <ul style="list-style-type: none"><li>• There is considerable variation in life expectancy between people living in the least deprived and most deprived areas of the Borough.</li><li>• The Borough has higher than the national average levels of adult and child obesity.</li></ul>

*Table 2.1: Key sustainability issues identified through scoping*

<ul style="list-style-type: none"><li>• There is a falling number of smokers and smoking-related deaths in the Borough.</li></ul>
<p><b>Local Economy</b></p> <ul style="list-style-type: none"><li>• The local economy is relatively strong, with a lower than average unemployment rate.</li><li>• Scientific and high-technology industries are growing in the Borough, providing economic diversification.</li><li>• Average salary rates are less than the national average.</li><li>• There is a significant difference between male and female average salaries.</li></ul>
<p><b>Material Assets</b></p> <ul style="list-style-type: none"><li>• There is a lack of accessibility and public transport infrastructure in rural areas such as The Wolds.</li><li>• Car use is increasing and the number of cars is predicted to grow significantly in the future, which will place additional pressure on the road transport network serving the Borough.</li><li>• There is a relative lack of footpaths in the east of the Borough.</li><li>• The cycle network is improving, particularly in Loughborough and the Soar Valley.</li><li>• Some rural areas suffer from limited accessibility to services.</li><li>• There is a deficiency of parks and open spaces in Loughborough.</li><li>• There is a lack of accessibility to open space, particularly in Shepshed and some rural service centres.</li><li>• Green infrastructure, including green wedges, are under pressure from development.</li></ul>
<p><b>Waste and Minerals</b></p> <ul style="list-style-type: none"><li>• Whilst Charnwood has a relatively high rate of recycling and composting, more than 50% of waste is not treated in these ways.</li><li>• Future population growth is likely to place increased pressure on waste management systems and facilities.</li><li>• There continues to be significant mineral extraction in the Borough.</li></ul>

## 2.3 SA Framework

- 2.3.1 Table 2.2 sets out the fourteen SA objectives that have been established as a result of the scoping process (i.e. by establishing the key issues that need to be addressed through the SA process). Each SA objective is supported by a list of sub-criteria and potential indicators for monitoring.
- 2.3.2 The SA Framework forms a basis for the appraisal of all elements of the Plan, and any reasonable alternatives. Essentially, the SA seeks to determine how the Plan performs in relation to each of the SA Objectives and whether the proposals would lead to a significant effect on the baseline position associated with each SA Objective.
- 2.3.3 The supporting appraisal criteria are devised to help guide the appraisal process and prompt thought and discussion about the key issues for each objective. However, they are not intended to be answered one-by-one for every single element of the plan.

**Table 2.2:** The SA Framework (topics, objectives and supporting questions)

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>1. Landscape</b> - Protect and enhance the integrity and quality of the Borough's urban and rural landscapes, maintaining local distinctiveness and sense of place.</p>	<ul style="list-style-type: none"> <li>- Protect and enhance landscape character in accordance with management objectives.</li> <li>- Maintain settlement identity and prevent coalescence.</li> <li>- Protect and enhance areas of tranquillity.</li> <li>- Promote schemes designed to promote the diversity of landscape and built character into new development.</li> <li>- Minimise detrimental visual intrusion.</li> <li>- Minimise light pollution.</li> </ul>	<ul style="list-style-type: none"> <li>- Change in quality of landscape character and condition.</li> <li>- The condition and quality of new characteristics introduced to the environment.</li> <li>- Percentage of open countryside.</li> <li>- Change in areas designated for their landscape value.</li> </ul>
<p><b>2. Biodiversity and nature conservation</b> - Protect and enhance biodiversity, habitats and species</p>	<ul style="list-style-type: none"> <li>- Protect and enhance designated sites including SSSIs, LNRs and LWSs.</li> <li>- Protect and enhance priority habitats and species.</li> <li>- Contribute to the protection and creation of new BAP habitats.</li> <li>- Avoid habitat fragmentation and increase connectivity of habitats.</li> <li>- Enhance community engagement with biodiversity.</li> <li>- Encourage the protection and provision of green and open spaces.</li> </ul>	<ul style="list-style-type: none"> <li>- Condition of designated sites.</li> <li>- Planning/applications refused/granted in designated sites, green wedges and wildlife corridors.</li> <li>- Percentage of land designated as nature conservation sites as a result of Local Plan policies.</li> <li>- Completed development that has resulted in the loss or creation/restoration of BAP habitats.</li> </ul>

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>3. Water Quality -</b> Protect and improve the quality and quantity of the water in the Borough's surface and groundwaters.</p>	<ul style="list-style-type: none"> <li>- Contribute to the achievement of WFD objectives.</li> <li>- Encourage sustainable and efficient management of water resources.</li> <li>- Protect and where possible improve drinking water quality.</li> <li>- Improve water quality in the Borough's watercourses.</li> <li>- Enhancement and recreation of natural watercourses.</li> <li>- Increase the use of SuDS.</li> </ul>	<ul style="list-style-type: none"> <li>- Water quality of the Borough's watercourses.</li> <li>- Number of pollution incidents.</li> <li>- Number of SuDS schemes installed.</li> <li>- Number of schemes contributing to the achievement of WFD objectives.</li> <li>- Percentage of waterbodies achieving 'Good' ecological status.</li> </ul>
<p><b>4. Flood Risk –</b> Reduce the risk of flooding to existing communities and ensure no new developments are at risk.</p>	<ul style="list-style-type: none"> <li>- Minimise the risk of flooding to people and properties.</li> <li>- Promote and increase the use of SuDS that result in Greenfield or better run-off rates.</li> <li>- Only development appropriate to the Flood Zone shall take place.</li> <li>- All new development takes account of the 2016 Climate Change allowances.</li> </ul>	<ul style="list-style-type: none"> <li>- Number of developments accompanied by a Surface water Management Plans.</li> <li>- Number of SuDS schemes installed.</li> </ul>
<p><b>5. Land -</b> Protect the Borough's soil resources.</p>	<ul style="list-style-type: none"> <li>- Reduce soil erosion and protect and enhance soil quality and quantity.</li> <li>- Minimise the loss of Grade 2 and Grade 3a ALC land.</li> <li>- Reduce contamination of soils from development, industry or agriculture.</li> <li>- Promote the use of brownfield land for development where possible.</li> <li>- Increase the remediation and regeneration of contaminated land.</li> </ul>	<ul style="list-style-type: none"> <li>- Area of greenfield land affected by development.</li> <li>- Areas of ALC grading 2 and 3a lost to development.</li> <li>- Number of land remediation schemes.</li> </ul>
<p><b>6. Air quality -</b> Improve local air quality</p>	<ul style="list-style-type: none"> <li>- Maintain and improve local air quality.</li> <li>- Promote measures that will remove the occurrence of AQMAs.</li> <li>- Reduce the impacts on air quality from transport.</li> <li>- Mitigate against the uses that generate NO2 or other particulates.</li> </ul>	<ul style="list-style-type: none"> <li>- Rate of transport modal shift across Borough.</li> <li>- Exceedances of air quality objectives.</li> <li>- Nitrogen dioxide, sulphur dioxide and particulate emissions.</li> <li>- Population living in AQMAs.</li> <li>- Number of complaints received regarding odour nuisance.</li> </ul>

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>7. Climate change</b> - Reduce the impacts of climate change and reduce greenhouse gas emissions.</p>	<ul style="list-style-type: none"> <li>- Deliver schemes that promote habitat and species resilience and adaptability to the effects of climate change.</li> <li>- Promote measures that minimise greenhouse gas emissions.</li> <li>- Minimise the likely impacts of climate change through promotion of appropriate adaptation measures in new development.</li> <li>- Promote the development of renewable energy generation.</li> <li>- Promote water efficiency measures in new development.</li> <li>- Reduce waste and increase reuse, recycling and energy produced of waste.</li> <li>- Promote measures that reduce the need to travel and travel distances.</li> <li>- Promote measures to reduce the need to travel by car.</li> <li>- Promote use of public transport.</li> </ul>	<ul style="list-style-type: none"> <li>- Greenhouse gas emissions.</li> <li>- New development achieving 'good', 'very good' or 'excellent' BREEAM or EcoHomes rating.</li> <li>- Proportion of total electricity consumption from renewable sources.</li> <li>- Energy and water use per household.</li> <li>- Condition of designated sites.</li> <li>- Waste to landfill, recycling and composting rates.</li> <li>- Peak traffic flows.</li> <li>- Number of public transport services and cycle routes created.</li> <li>- % change in number of people using public transport.</li> </ul>
<p><b>8. Historic environment</b> - Conserve and enhance the historic environment, heritage assets and their settings.</p>	<ul style="list-style-type: none"> <li>- Conserve and enhance designated heritage features.</li> <li>- Maintain and enhance the character and distinctiveness of Conservation Areas and settlements.</li> <li>- Promote high-quality design.</li> <li>- Promote heritage based sustainable tourism.</li> <li>- Provide for increased access to and enjoyment of the historic environment.</li> <li>- Provide for increased access and enjoyment of the historic environment.</li> <li>- Promote heritage-led regeneration.</li> <li>- Increase the social benefit derived from the historic environment.</li> </ul>	<ul style="list-style-type: none"> <li>- Planning permissions granted/refused that affect the setting of a designated heritage asset.</li> <li>- Loss or damage of heritage assets.</li> <li>- Number of heritage assets on the Heritage at Risk register.</li> <li>- Number of locally listed heritage assets at risk.</li> <li>- % change in number of visits to historic sites.</li> <li>- Number of planning applications where archaeological investigations were required prior to planning approval.</li> </ul>

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>9. Population –</b> Reduce poverty and deprivation</p>	<ul style="list-style-type: none"> <li>- Increase community engagement and decision-making.</li> <li>- Increase racial and gender equality and community cohesion.</li> <li>- Reduce poverty and social exclusion.</li> <li>- Reduce crime and the fear of crime.</li> </ul>	<ul style="list-style-type: none"> <li>- Local and sub-regional measurements of deprivation.</li> <li>- Life expectancy between wards.</li> <li>- Crime rates.</li> <li>- Self-reported measure of people’s feeling of safety.</li> <li>- Rates of participation of democratic processes.</li> <li>- Inequality measures, such as education levels and wages.</li> <li>- % BME working age people in employment.</li> </ul>
<p><b>10. Population -</b> Promote healthy and active lifestyles in the Borough</p>	<ul style="list-style-type: none"> <li>- Increase access to high quality healthcare facilities.</li> <li>- Promote active and healthy lifestyles.</li> <li>- Promote recreational and leisure opportunities and access to open space.</li> <li>- Increase regular participation in physical activities and sport.</li> </ul>	<ul style="list-style-type: none"> <li>- Life expectancy rates.</li> <li>- Death rates for cancer, circulatory disease, accidents and suicides.</li> <li>- All-age all-cause mortality rate.</li> <li>- Obesity levels.</li> <li>- Number of people exercising regularly.</li> <li>- Self-reported measure of people’s overall health and wellbeing.</li> </ul>
<p><b>11. Population -</b> Improve access to affordable housing and ensure an appropriate mix of dwelling sizes, types and tenures within local communities.</p>	<ul style="list-style-type: none"> <li>- Provide an adequate supply of housing.</li> <li>- Reduce homelessness.</li> <li>- Make best use of existing housing stock.</li> <li>- Provide quality and flexible homes that meet the needs of the community</li> </ul>	<ul style="list-style-type: none"> <li>- Number of housing completions and projected completions.</li> <li>- Housing quality in new housing development based on Building for Life Assessments.</li> <li>- Net additional Gypsy and Traveller pitches.</li> <li>- Number of households living in temporary accommodation.</li> <li>- Homelessness rates.</li> </ul>

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>12. Local economy</b> - Promote a sustainable and diversified economy, and improve skills and employability</p>	<ul style="list-style-type: none"> <li>- Promote retention of existing jobs and create new employment opportunities.</li> <li>- Increase diversity in the range of job opportunities.</li> <li>- Ensure an adequate supply of a range of sites in terms of types and quality for employment uses.</li> <li>- Improve access to opportunities for education, learning and skills training for all sectors of the community.</li> <li>- Support the creation of flexible jobs to meet the changing needs of the population.</li> </ul>	<ul style="list-style-type: none"> <li>- Amount of completed retail, office and leisure development.</li> <li>- New business registration rates.</li> <li>- Employment rates.</li> <li>- Proportion of economically active people unemployed.</li> <li>- Average earnings.</li> <li>- Percentage of population that have attained a qualification of NVQ2 and above.</li> <li>- Proportion of 18-24 year olds enrolled in training, full time education or employment.</li> <li>- % of 16 year olds achieving 5+ GCSEs Grade A*-C.</li> <li>- No. of residents attending university.</li> <li>- Business surveys of staff/skills shortages.</li> </ul>
<p><b>13. Material assets</b> - Increase access to a wide range of services and facilities.</p>	<ul style="list-style-type: none"> <li>- Improve availability and accessibility of key local facilities, including healthcare, education, retail and leisure.</li> <li>- Promote the development of a range of high quality, accessible community, cultural and leisure facilities.</li> <li>- Maintain and enhance rural facilities.</li> <li>- Increase voluntary and community infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>- Number of people with adequate access to key services (e.g. hospitals, health centres, residential homes, schools).</li> <li>- Availability and accessibility of a range of community, cultural and leisure facilities.</li> <li>- Access to services and facilities by public transport, walking and cycling.</li> </ul>

SA objectives	Appraisal Criteria	Potential Indicators
<p><b>14. Mineral resources</b> - Ensure sustainable management of the Borough's mineral resources.</p>	<ul style="list-style-type: none"> <li>- Increase the retention of mineral workings for biodiversity, landscape and the general public.</li> <li>- Reduce the use of minerals and increase the reuse of material on and off site.</li> <li>- Safeguard the existing development from the environmental effects of mineral workings.</li> </ul>	<ul style="list-style-type: none"> <li>- Total aggregates extracted from within the Borough.</li> <li>- Amount of mineral extraction areas designated for environmental protection.</li> <li>- Total aggregates used within the Borough.</li> <li>- Environmental incidents from mineral extraction facilities.</li> </ul>

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# **Introduction to the alternatives**

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## 3 INTRODUCTION TO THE ALTERNATIVES

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### 3.1 Identifying and appraising alternatives

- 3.1.1 A critical stage of the SA process is the consideration of alternative approaches and options for delivering the objectives of the Plan.
- 3.1.2 Appraisal of reasonable alternatives allows for a fair comparison of different strategies, policy approaches and site options to be undertaken. The findings of appraisal can then help to inform decisions about the Plan approach.
- 3.1.3 An important aspect of an effective SA is to help stakeholders (i.e. businesses, communities, developers, statutory bodies) understand the benefits, constraints and opportunities associated with different strategies, policy approaches and site options.
- 3.1.4 The Regulations<sup>1</sup> are not prescriptive in how this should be undertaken, 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 or programme.
- 3.1.5 The key issues identified by the Council at this stage of Plan making relate to the following plan elements.
- Housing growth and distribution
  - Broad approaches to employment land delivery
- 3.1.6 The following chapters deal with the alternative approaches that have been identified and assessed for each of the Plan elements listed above. Each of these chapters is structured as follows:
- **Background** - *This introduces the issues and why it is considered important to explore alternatives for this aspect of the Plan.*
  - **Part 1: The reasons for selecting the alternatives** - *This describes the alternatives that have been considered and which are considered to be reasonable.*
  - **Part 2: Appraisal of alternatives** – *This summarises the appraisal findings for each of the reasonable alternatives.*
  - **Part 3: Next Steps** - *This sets out the next stages of the plan-making process, how the SA will be taken into account in the decision making process and what further SA tasks may need to be undertaken.*

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<sup>1</sup> Environmental Assessment of Plans and Programmes Regulations 2004



# **Alternatives appraisal: Housing**

**04**

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## **4 ALTERNATIVES APPRAISAL: HOUSING**

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### **4.1 Background**

- 4.1.1 Setting the strategy for the amount and distribution of housing and employment development is a crucial element of the plan-making process.
- 4.1.2 A robust approach to Plan making should involve testing different approaches as to how the plan objectives can be achieved. Therefore, there is a need to examine the evidence behind housing and employment needs and understand the implications of meeting such needs in a range of different (but reasonable) ways.
- 4.1.3 It is acknowledged that as the new local plan progresses housing and employment distribution should be considered alongside one another to ensure a well-balanced Plan. However, at this early stage the alternatives for employment and housing distribution have been appraised separately for the following reasons.
- There are sufficient employment land commitments (with the exception of B1a/b) which limits the extent of distribution options somewhat.
  - An employment land review has considered the quality of existing employment land and whether there is scope to redevelop for alternative uses. The distribution of employment land is a more focused exercise which has been guided by this detailed evidence study.
- 4.1.4 The final spatial strategy will draw together conclusions from different elements of the plan-making process (including SA findings) that relate to housing and employment (as well as other important factors).

### **4.2 Part 1: The reasons for selecting the alternatives**

- 4.2.1 Before commencing the alternatives development process, it was important to establish some key issues and principles that would shape the development strategy for Charnwood (listed below). This is important, as reasonable alternatives for housing growth must be deliverable and contribute to the achievement of the Plan vision and objectives.
- Government Policy.
  - The emerging Strategic Growth Plan for Leicester and Leicestershire – Which promotes Charnwood Borough Council to meet its housing needs through managed growth on the edge of city, Loughborough and a ‘northern gateway’ strategic focus (though this would be a longer term strategy).
  - The Cabinet vision for Charnwood.
  - The balance and ability to deliver new homes and jobs.
  - The need for homes and how this compares to the availability of land and opportunities for new supply.
  - The economy and the need for new employment land, the future prospects for existing employment sites, opportunities for new employment provision
  - Transport – commuting, travel to work, congestion, network capacity.

- 4.2.2 Taking these factors into account, an important starting point was to look at the level of growth that should be delivered and the places that this could reasonably be delivered.
- 4.2.3 It is considered less meaningful to test growth scenarios without an understanding of where this growth would be located. Therefore, the reasonable alternatives have been identified by a consideration of both growth and distribution approaches at the same time. Each factor is discussed below individually, before drawing both together to identify the reasonable alternatives.

#### Housing Need

- 4.2.4 The starting point for identifying growth options is the objectively assessed housing need identified in the Housing and Employment Development Needs Assessment (HEDNA). This is a figure of 24,850 dwellings for Charnwood Borough. Taking away existing commitments, completions and already allocated sites that are expected to be delivered in the plan period (16,679), this leaves a 'to be found' figure of 8,100 new homes over the plan period. The first growth option is therefore to plan to meet this level of need through the allocation of land to deliver 8,100 homes.
- 4.2.5 It is considered unreasonable to provide for housing land below this level as there is no evidence to suggest that there are substantial constraints to the delivery of the objectively assessed needs.
- 4.2.6 A second growth option has been identified that would provide land for the delivery of 15,700 homes. This higher provision scenario is informed by Council commissioned evidence about delivery factors, which suggests that a greater number of development opportunities could provide a high degree of flexibility to maximize the likelihood of meeting objectively assessed housing needs.
- 4.2.7 This reflects the need for flexibility in the instance that allocated or committed sites may not come forward as anticipated, as well as accounting for lead-in times and build-out rates. This is a reasonable alternative as it helps to understand the effects of allocating substantially more land to maximize the likelihood of meeting housing needs within the plan period.
- 4.2.8 It would be possible to test a very large number of additional growth options lying between these two housing allocation options (8,100 / 15,700). However, at this stage it is considered proportionate and appropriate to compare just these two distinct levels of housing delivery. This will allow for a good understanding of the implications of land release. The growth options are sufficiently distinct to allow meaningful conclusions to be reached and to inform debate about the relative merits of such approaches.

#### Housing distribution

- 4.2.9 Strategic options for the distribution of new housing development have been identified taking account of the land known to be available through the Charnwood Strategic Housing Land Availability Assessment 2017.
- 4.2.10 The options have been presented through different levels of growth being allocated to different tiers in the Charnwood settlement hierarchy. At the top of the hierarchy are those settlements/ sites which adjoin the Leicester Urban area. Loughborough and Shepshed are in the second tier of the settlement hierarchy.

- 4.2.11 The middle tiers of the hierarchy are Service Centres and Other Settlements (in turn) and at the lowest tier of the hierarchy are small villages and hamlets.
- 4.2.12 A large number of options could be explored, but there is a need to ensure that options are meaningful, discrete and deliverable. It is also necessary to limit the number of alternatives that are tested and presented for consultation to aid in the decision-making process. Too many options can make it difficult for stakeholders to engage.
- 4.2.13 With these factors in mind, the following approaches to distribution have been identified as reasonable.

**Table 4.1:** Approaches to the distribution of housing

Distribution Strategy	Description / Assumptions
Leicester & Loughborough focus	Development focussed on key urban areas firstly at the edge of Leicester Urban Area (edge of Leicester, Birstall, Thurmaston and Syston) and then the Loughborough Urban Area (Loughborough and Shepshed). Development capacity maximised at higher level in settlement hierarchy before capacity taken at next settlement tier.
Leicester & Loughborough + Service Centres	Development focused on Leicester, then Loughborough, with remainder of development focussed on Service Centres. Development capacity maximised at Leicester in settlement hierarchy before capacity taken at next settlement tier. Remainder of housing distributed between Loughborough/ Shepshed and Service Centres to reflect hierarchy.
Settlement Hierarchy distribution	Development focused on Leicester, then Loughborough, with remainder of development focussed on Service Centres. Development capacity maximised at Leicester in settlement hierarchy before capacity taken at next settlement tier. Remainder of housing distributed between Loughborough/ Shepshed, Service Centres and Other Settlements to reflect hierarchy.
Proportionate Distribution	Housing distributed across settlement hierarchy in proportion to the population of each settlement hierarchy tier.
Leicester & Loughborough + New Settlements	Development at Leicester and New Settlements maximised, remainder focussed at Loughborough.
Leicester & Loughborough + Service Centres + New Settlements	Development at Leicester and new settlements maximised, with remainder of development distributed between Loughborough and Service Centres to reflect hierarchy.
Large Standalone new settlement	A development strategy based around new settlements is brought out as an alternative to be considered, as this strategy has been favoured by some respondents to consultations on the Charnwood Local Plan Core Strategy. However, a reliance on this approach alone is considered to be an unreasonable approach to the delivery of housing within the plan period.

4.2.14 Other broad approaches to distribution were identified but subsequently dismissed as unreasonable. The outline reasons for this are presented below:

*Focus on growth at smaller settlements:* This approach was dismissed as unreasonable as it would not reflect the settlement hierarchy and would not meet the Plan Objectives that seek to achieve growth in key locations.

*Focus on a large standalone settlement:* Responses to consultations on the Charnwood Local Plan Core Strategy suggested a new standalone settlement as a means of meeting the borough's housing need. Evidence suggests however that a new settlement option is unlikely to deliver housing before 2030 and therefore unlikely to meet housing need in the period covered by the new local plan; the option therefore may not be considered to be a reasonable alternative.

Given the long lead in times for a standalone new settlement the option may only represent a longer term strategy for Charnwood's development needs beyond the 2036. If a new settlement is considered to be an appropriate strategy for meeting the borough's development needs in the longer term it might be sensible to identify and plan for it now rather than leave it to the next plan.

Despite being considered unreasonable, the option is included within the sustainability appraisal (see Option C1 in table 4.2 below) to recognise previous consultation responses to the Charnwood Local Plan Core Strategy, and is intended to inform public debate on how Charnwood meets its development needs both up to 2036 and beyond.

#### Combining growth and distribution alternatives

4.2.15 In order to give the appraisal context and meaning, the two growth scenarios were combined with each of the six high-level spatial options. This is to allow for a broad understanding of effects to be identified for each of the spatial options, and how these effects would differ should the level of growth be higher or lower.

4.2.16 This combination resulted in ten discrete options that have been tested in the SA (see table 4.2 below). Two of the distribution alternatives (B1 and B5) were not reasonable at the higher level of growth, as there is insufficient land capacity identified for these to be delivered.

4.2.17 A further scenario was identified to explore the potential for a large standalone settlement. This is not related to either Scenario A or B with regards to growth or distribution, and therefore, is considered as a distinct scenario.

*Table 4.2: High level reasonable alternatives for housing strategy*

Distribution Strategy	Housing land delivery		
	Scenario A (8100)	Scenario B (15,700)	Scenario C (8,810-10,810)
Leicester & Loughborough focus	Option A1	/	/
Leicester & Loughborough + Service Centres	Option A2	Option B2	/
Settlement Hierarchy distribution	Option A3	Option B4	/
Proportionate distribution by settlement size	Option A4	Option B4	/
Leicester & Loughborough + New Settlements	Option A5	/	/
Leicester & Loughborough + Service Centres + New Settlements	Option A6	Option B6	/
Standalone new settlement	/	/	Option C1

4.2.18 For each of the options in table 4.2 above, an indicative amount of growth has been apportioned to different levels of the current settlement hierarchy for Charnwood to enable an appraisal of potential effects at the settlement level as well as for the borough as a whole.

4.2.19 These housing figures are different depending upon the focus of each distribution strategy; but also take account of the availability of deliverable land. For the options that involve new settlements, assumptions have been made about the broad locations that these could be located.

4.2.20 **Appendix A** sets out the distribution for each option in greater detail, including a map for each approach to outline the broad locations for growth. At this stage, specific sites for allocation have not been identified but will be considered as further SA work is undertaken.

### 4.3 Part 2: Appraisal of the reasonable alternatives

4.3.1 **Appendix B** sets out a detailed appraisal of each of the eleven options (the reasonable alternatives) against each of the SA Objectives. This breaks down the effects at each level of the current settlement hierarchy for Charnwood and how this relates to an overall score for the borough as a whole for each sustainability objective.

4.3.2 The findings of the detailed appraisals are summarised in this section below, preceded by a short discussion of the methods used to determine significance.

## Visual representation of the effects

- 4.3.3 **Table 4.3** (page 27) sets out a visual summary of the effects associated with each of the housing options.
- 4.3.4 The table has been compiled from the detailed assessments within Appendix B. This is supported by a discussion of the key effects and the differences between the options.
- 4.3.5 The significance tables below explain what each score in table 4.3 actually means; and are primarily used to identify whether effects are positive, negative or neutral and most importantly whether these effects could be significant.
- 4.3.6 For each housing option illustrated in table 4.3, one of the following symbols has been allocated for each SA objective to determine the significance of the effects on a borough-wide basis.

Effects Significance	Effects symbol
<i>Significant positive effects</i>	++
<i>Minor positive effects</i>	+
<i>Neutral effects</i>	0
<i>Minor negative effect</i>	-
<i>Significant negative effect</i>	--

Uncertain effects	Effects symbol
<i>Uncertain significant positive effect</i>	++ <sup>?</sup>
<i>Uncertain minor positive effect</i>	+ <sup>?</sup>
<i>Uncertain effects</i>	?
<i>Uncertain minor negative effect</i>	- <sup>?</sup>
<i>Uncertain significant negative effect</i>	-- <sup>?</sup>

- 4.3.7 Where there is uncertainty, the nature of such effects has been identified. For example, an uncertain negative effect would be recorded if there is a chance that negative effects could occur but this is dependent upon the precise location of development.
- 4.3.8 It may still be possible to rule out significant effects though, and so the unknown effect may be recorded as minor or potentially significant.
- 4.3.9 A fuller explanation of the methods involved in the appraisals is set out in **Appendix B**.

Table 4.3 Housing options: Summary of appraisal findings

	Landscape character	Biodiversity	Water quality	Flood Risk	Soil resources	Air quality	Climate change	Historic Environment	Deprivation	Healthy lifestyles	Housing	Local Economy	Accessibility	Minerals
<b>Scenario A – 8,100 homes</b>														
Option A1	-	-	-	-	--	-	++	-	++	+	+ <sup>?</sup>	++	+	-
Option A2	-	-	-	0	--	-	+	-	+	+	+	++	+	-
Option A3	-- <sup>?</sup>	-	-	0	--	-- <sup>?</sup>	0	-- <sup>?</sup>	+	0	+	++	+	-
Option A4	--	-- <sup>?</sup>	-	0	--	-- <sup>?</sup>	-	-	+ <sup>?</sup>	0	+	+	+	-
Option A5	-	-- <sup>?</sup>	0	0	--	-	-- <sup>?</sup>	-- <sup>?</sup>	+	+	+ <sup>?</sup>	+	+ <sup>?</sup>	-
Option A6	-	-- <sup>?</sup>	0	0	--	-	-- <sup>?</sup>	-- <sup>?</sup>	+	+	+	+	0	-
<b>Scenario B – 15,700 homes</b>														
Option B2	--	--	-	--	--	--	+	--	++	+	++	++	++	-
Option B3	--	--	-	-	--	--	+	--	++	+	++	++	++	-
Option B4	--	--	-	-	--	--	-	--	+	+ <sup>?</sup>	++	++	-	-
Option B6	--	--	-	-	--	--	-- <sup>?</sup>	--	++	++	++	++	++	-
<b>Scenario C – Standalone settlement</b>														
Option C1	-	0 <sup>?</sup>	?	0	--	-- <sup>?</sup>	-- <sup>?</sup>	-- <sup>?</sup>	0	+	+	-	+	0

### Summary of effects for Scenario A (8,100 homes)

- 4.3.10 There are similarities between how each option has performed, which is to be expected given that there are common elements and the level of growth is the same. For example, each of the options is predicted to have a significant negative effect with regards to the loss of soil, as regardless of distribution it is likely that large amounts of Grade 2 or 3 agricultural land would be lost. Each option is also predicted to have minor negative effects with regards to minerals as there would be potential overlap with Minerals Safeguarded Areas regardless of distribution.
- 4.3.11 Option A1 is not predicted to have any further significant negative effects, though minor negative effects are predicted against all of the environmental factors. However, this option performs most favourably with regards to Climate Change and Deprivation, being the only option at this level of growth to generate significant positive effects for these factors. There would also be significant positive effects on the economy and minor positives for accessibility and health. The positive effects associated with housing are uncertain though.
- 4.3.12 Option A2 performs similarly to option 1 with regards to effects upon the environment, though flood risk is neutral rather than negative. However, whilst positive effects are predicted for social factors such as health, deprivation, housing, economy and accessibility, these are less significant for deprivation compared to Option A1. The option also performs less well compared to option 1 with regards to climate change, but the positive effects associated with housing ought to be more certain.
- 4.3.13 Option A3 performs more differently compared to options A1 and A2. This option could generate significant negative effects on landscape, but the negative effects upon air quality and the historic environment ought to be lower. Similar to options A1 and A2, this approach would also generate significant positive effects for the economy, and minor positives for housing, accessibility and deprivation. However, the effects for health and wellbeing would only be neutral, and no positive effects would be generated with regards to climate change.
- 4.3.14 Unlike options A1-A3, Option A4 does not generate any significant positive effects and performs the worst of any option in terms of tackling deprivation. It also performs the poorest with regards to climate change as it could generate minor negative effects due to the increased likelihood of car travel. With regards to environmental factors, this option performs better in some respects compared to options A1-A3, as a dispersed approach ought to better avoid potential effects on biodiversity and air quality. However, this option would generate a significant negative effect for landscape.
- 4.3.15 Options A5 and A6 perform similarly, and somewhat different to the other four options. These two options perform slightly better with regards to environmental factors, with both being the only options to have neutral effects on water quality, and flood risk. These two options would also only have uncertain negative effects for biodiversity, climate change and the historic environment. Whilst these two options would have broadly positive effects upon socio-economic factors, these would only be minor in nature.

### Summary of effects for Scenario B (15,700 homes)

- 4.3.16 As a general point, each of the options at the higher level of housing provision are predicted to perform more positively with regards to socio-economic factors, and more negatively with regards to environmental factors. In particular, each option would generate significant positive effects in terms of housing provision and economic growth. This is due to increased flexibility in housing provision, and the corresponding increase in homes likely to be available to support economic growth and to provide investment in infrastructure improvements. Conversely, all four of these options are likely to perform worse than the six options under scenario 1 with regards to environmental protection. In particular, the effects upon air quality, the historic environment and biodiversity are predicted to be significantly negative for options B2, B3, B4 and B6. At the lower scale of growth, the effects upon these factors would only be minor for all of the options.
- 4.3.17 In terms of comparison between these options, there are many similarities given that the scale of growth necessitates the release of a greater amount of land in Loughborough and the Service Centres in particular.
- 4.3.18 Options B2 and B3 perform the same with the exception that Option B2 could have significant negative effects upon flood risk compared to a minor effect for Option B3.
- 4.3.19 Option B4 performs similarly to Options B2 and B3 with regards to environmental factors, but due to the dispersed nature of some of the growth, a negative effect is predicted for Climate Change rather than positives (as per options B2 and B3).
- 4.3.20 The magnitude of the positive effects would also be lower compared to options B2 and B3, with only minor positive effects predicted in terms of deprivation, and greater uncertainty about positive effects on health and wellbeing occurring overall. Despite significant positive effects upon the economy, this approach is also the only option under scenario 2 which is predicted to generate minor negative effects due to an increased amount of growth being located in smaller settlements.
- 4.3.21 At this scale of growth, Option B6 performs most positively with regards to socio-economic factors, with significant positive effects identified for deprivation, housing, economy, accessibility and health and wellbeing (the only option to generate significant effects on this factor). This option also performs similarly to options B2 and B3 with regards to negative effects upon the environment. However, the effects in terms of climate change are potentially negative rather than positive (as per options B2 and B3).

### Summary of effects for Scenario C (Standalone new settlement)

- 4.3.22 The effects associated with option C1 are difficult to determine accurately as the location of a new settlement has not been identified. However, a broad assessment of potential opportunity areas has been undertaken to understand what the effects might be. Given that the scale of growth is closer to Scenario A than to Scenario B, the effects are more comparable to the options in this scenario. However, there are differences across the range of sustainability objectives discussed below.
- 4.3.23 The primary difference between C1 and all of the other options is the potential for negative effects with regards to housing. This relates to an overreliance on a new settlement, which could mean under delivery in housing needs in the short term and would also provide less choice and flexibility across the borough. Option C1 is also the least likely to help address deprivation as a new settlement would be totally removed from existing communities. Similarly, the effects in terms of transport would

be less positive compared to the options that involve development at existing settlements that have established services and transport links. It is unclear the extent to which transport improvements would be secured through a large new settlement, but it is anticipated that car use would be necessary.

- 4.3.24 With regards to environmental factors, a new settlement is likely to perform relatively well, with the broad opportunity areas not being particularly sensitive for biodiversity, water quality, flood risk and the historic environment. However, landscape effects would be anticipated to be significant in that particular location. A concentration of growth could also affect air quality depending upon where the settlement was located and the transport measures secured.
- 4.3.25 With regards to land usage, this option would result in a significant loss of agricultural land (similar to all other options) but would be less likely to have negative effects with regards to minerals safeguarding.

#### Comparison of growth scenarios and options

- 4.3.26 There are clear differences between scenarios A and B with regards to the generation of significant positive and negative effects. Whilst scenario A options are predicted to have fewer significant positive effects, the growth would be accommodated without generating significant negative effects. Conversely, scenario B options would generate more significant positive effects, but at the expense of several environmental factors. The difference in the amount of housing between the two options is fairly large, and therefore, a level of growth in between the two options could possibly provide a better balance between positive social-economic effects and negative environmental effects.
- 4.3.27 The effects related to option C1 are more in-line with those for the options under scenario A, which is to be expected given that the scale of growth is similar. However, the spatial approach results in some notable differences.
- 4.3.28 With regards to distribution, the effects at a higher scale of growth are more similar for each of the options. This is due to the necessity to release similarly large amounts of land at Loughborough/Shepshed and the Service Centres, whilst delivering the same amount of growth at the PUA.
- 4.3.29 At the lower scale of growth, the differences between the options are greater.
- 4.3.30 Option A4 is predicted to have the most negative effects on balance, and is also unlikely to generate significant positive effects. Consequently, this option is considered to perform the poorest under scenario A.
- 4.3.31 Options A1 and A2 perform the best with regards to social-economic factors as they generate mostly positive (and some significant) effects. However, these two options are predicted to have slightly greater negative effects on environmental factors overall when compared to Options A5 and A6.
- 4.3.32 Options A5 and A6 have the fewest negative effects overall across the range of environmental factors, but would only generate minor positive effects on socio-economic factors and perform poorer with regards to climate change.
- 4.3.33 Option C1 performs relatively well with regards to environmental factors compared to the options under Scenario A. However, the positive effects of housing, economy, accessibility and deprivation would be of a lesser magnitude. This is due to the spread of benefits across the borough being limited and the likelihood that housing

delivery and economic activity in the short to medium term would likely be lower. The assessment of option C1 does demonstrate that a new settlement could be a positive longer term strategy, but evidence suggests that a new settlement is very unlikely to meet housing need in the plan period and other spatial strategies would be more appropriate up to 2036.

#### **4.4 Part 3: Next steps**

- 4.4.1 At this stage, the Council has not identified a preferred approach to housing growth or distribution. The spatial strategy will be informed by a focused consultation on development strategy and key policy choices in April - June 2018.
- 4.4.2 This interim SA Report is available as part of the focused consultation process; helping to inform stakeholders of the sustainability implications of different approaches to the spatial strategy.
- 4.4.3 The findings in the SA will also be taken into account in the Council's decision-making process along with consultation responses and other key pieces of evidence.
- 4.4.4 As the plan-making process progresses, there will be a need to build upon the appraisal of alternatives at this stage. The appraisal of alternatives in this interim report provides a 'top-down' approach to establishing the strategy for housing, but it is also important to consider factors from the 'bottom-up'. Typically, this involves the appraisal of individual site options (or packages of sites) that could be allocated to support the housing strategy.



# **Alternatives appraisal: Employment**

**05**

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## **5 ALTERNATIVES APPRAISAL: EMPLOYMENT**

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### **5.1 Background**

- 5.1.1 In order to contribute to the achievement of economic growth aspirations, it is important that the Local Plan identifies the need for employment land and an appropriate distribution strategy for meeting such needs.
- 5.1.2 It is crucial that housing and employment needs are well balanced, and for the plan to promote a strategy that supports good accessibility to job opportunities for communities.
- 5.1.3 This section discusses how the Council has considered the evidence, and explored potential alternatives relating to developing Charnwood's strategy for employment.

### **5.2 Part 1: The reasons for selecting the alternatives**

- 5.2.1 The options for employment land provision have been informed primarily by the conclusions of the Charnwood Employment Land Review March 2018 and by the Leicester and Leicestershire Housing and Economic Development Needs Assessment 2017.
- 5.2.2 The Employment Land Review shows that there is sufficient land with planning permission or committed through the Core Strategy to meet the overall quantitative need for employment land. This evidence does however suggest that there are qualitative issues to consider such as the location and type of employment land.
- 5.2.3 Options for employment were considered reasonable if:
- they were consistent with the quantity of employment land recommended through Leicester and Leicestershire Housing and Economic Development Needs Assessment 2017 and / or
  - a qualitative demand was identified through the Charnwood Employment Land Review 2018
- 5.2.4 In considering these factors, only three options were identified as reasonable.
- 1 Rely on existing employment allocations identified in the Core Strategy and 2004 Borough of Charnwood Local Plan.
  - 2 Identify new employment land to facilitate regeneration and release poorer quality employment sites for alternative uses.
  - 3 Identify new employment land to respond to demand for large warehousing.
- 5.2.5 Given the evidence about Charnwood's need and supply for new employment land, options 1 and 2 do not propose any net additional employment land.
- 5.2.6 Option 1 represents a 'business as usual' strategy relying on existing Charnwood Local Plan Core Strategy and the Borough of Charnwood Local Plan allocations (in addition to committed development).

- 5.2.7 Option 2 would identify 10ha of new employment land in order to release poorer quality employment sites for alternative uses.
- 5.2.8 Employment evidence indicates that there are a number of sites which are in employment use in Thurmaston which are well occupied and functional but have a poor relationship with surrounding uses and in some cases are constrained by poor access. The Employment Land Review does not identify a specific site or sites for this replacement employment land. However, evidence suggests identifying around 10ha of new employment land north of the Leicester in the new local plan to enable the release of these existing alternative uses such as housing. This option would not involve any net additional land being identified though.
- 5.2.9 Option 3 would involve identifying 10ha of new employment land to respond to demand for large warehousing. The Employment Land Review indicates that the Council should consider whether it is appropriate to identify 10ha of land for large warehousing. The distribution of large housing was not provided through the Leicester and Leicestershire Housing and Economic Needs Assessment. The distribution of warehousing will require further discussions with partners under the duty to cooperate. The Employment Land Review indicates that this land would need to be delivered in a single location with excellent access to the strategic road network and is therefore likely to be located to the northeast of M1 Junction 23, near to Shepshed.
- 5.2.10 To avoid confusion the appraisal of options focuses on the difference between the options, in particular Options 2 and 3, rather than considering the likely significant effects of all the committed and allocated development proposed under Option 1 and common to Options 2 and 3.

### 5.3 Part 2: Appraisal of the reasonable alternatives

- 5.3.1 **Appendix C** sets out a detailed appraisal of each of the three employment options (i.e. the reasonable alternatives) against each of the SA Objectives. Unlike the housing options appraisal, the appraisal of the employment options is not broken down by the different levels of the settlement hierarchy as there are only small differences in the location of employment opportunities.
- 5.3.2 The findings of the detailed appraisals are summarised in this section below, preceded by a short discussion of the methods used to determine significance.
- Visual representation of the effects
- 5.3.3 **Table 5.1** sets out a visual summary of the effects associated with each of the employment options.
- 5.3.4 The table has been compiled from the detailed assessments within Appendix C. This is supported by a discussion of the key effects and the differences between the options.
- 5.3.5 The significance tables below explain what each score in table 4.4 actually means; and are primarily used to identify whether effects are positive, negative or neutral and most importantly whether these effects could be significant.
- 5.3.6 For each employment option illustrated in table 4.4, one of the following symbols has been allocated for each SA objective to determine the significance of the effects on a borough-wide basis.

Effects Significance	Effects symbol
Significant positive effects	++
Minor positive effects	+
Neutral effects	0
Minor negative effect	-
Significant negative effect	--

Uncertain effects	Effects symbol
Uncertain significant positive effect	++ <sup>?</sup>
Uncertain minor positive effect	+ <sup>?</sup>
Uncertain effects	?
Uncertain minor negative effect	- <sup>?</sup>
Uncertain significant positive effect	++ <sup>?</sup>

5.3.7 Where there is uncertainty, the nature of such effects has been identified. For example, an uncertain negative effect would be recorded if there is a chance that negative effects could occur but this is dependent upon the precise location of development.

5.3.8 It may still be possible to rule out significant effects though, and so the unknown effect may be recorded as minor or potentially significant.

5.3.9 A fuller explanation of the methods involved in the appraisals is set out in **Appendix C**.

*Table 5.1 Employment options: Summary of appraisal findings*

	Option 1	Option 2	Option 3
Landscape Character	0	0	0
Biodiversity	0	- <sup>?</sup>	-
Water quality	0	?	?
Flood Risk	0	0	0
Soil Resources	0	-	-
Air Quality	0	0 <sup>?</sup>	-
Climate Change	0	0	0
Historic Environment	0	0	0
Deprivation	0	?	+
Healthy Lifestyles	0	0	0
Housing	0	0	0
Local Economy	+	+	++
Accessibility	0	+ <sup>?</sup>	+
Minerals	0	-	0

- 5.3.10 Option 1 is predicted to have mostly neutral effects as it essentially represents a 'business as usual' scenario. However, a minor positive effect is predicted for the economy given that the approach maintains a positive strategy for economic growth for the borough.
- 5.3.11 Given that options 2 and 3 both involve 10ha of higher quality employment land, they are predicted to have a greater range of effects compared to option 1. For option 3, the overall level of provision is also 10ha higher, but the differences between these two options are still minimal.
- 5.3.12 With regards to landscape and heritage both options 2 and 3 are predicted to have neutral effects, as the sensitivity of the land likely to be involved is relatively low. Similarly, the effects in terms of flood risk and climate change would be limited from a borough-wide perspective.
- 5.3.13 Whilst there could be localised effects on biodiversity and air quality, these are not anticipated to be significant given the magnitude of growth involved and the prevailing baseline position.
- 5.3.14 Each option would lead to a further loss of soil resources, which is also a minor negative effect, though the potential for a loss of Grade 2 land exists for Option 2. The potential sterilisation of minerals is also greater for Option 2 (though effects would not be significant).
- 5.3.15 The effects on water quality are also likely to be minor and localised, but could present more of an issue for Option 2, where some potential sites are within close proximity to waterbodies.
- 5.3.16 With regards to positive social-economic effects, each option is likely to contribute positively to tackling deprivation through the provision of jobs in accessible locations. However, only option 3 is predicted to have significant positive effects with regards to the local economy on the basis that the type of employment that would be delivered would meet a specific business demand. The growth is also more likely to be strategic and support a wider population across the district.
- 5.3.17 Option 2 could potentially have benefits for housing as the release of lower quality sites from employment use could possibly mean that housing uses become suitable.
- 5.3.18 Overall, options 2 and 3 perform very similarly across the range of sustainability factors and it is likely that minor negative effects could be mitigated. The key differences between the Options are as follows
- 5.3.19 There is greater uncertainty related to effects for Option 2, given that specific sites have not yet been identified.
- 5.3.20 Only Option 3 generates significant positive effects (in relation to local economy).
- 5.3.21 Option 2 generates minor negative effects in terms of minerals, whereas option 3 does not.
- 5.3.22 Whilst Option 1 would not generate any negative effects, the potential for additional positive effects is limited too.

#### **5.4 Part 3: Next steps**

- 5.4.1 At this stage, the Council has not identified a preferred approach. The spatial strategy will be informed by a focused consultation on development strategy and key policy choices in April - June 2018.
- 5.4.2 This interim SA Report is available as part of the focused consultation process; helping to inform stakeholders of the sustainability implications of different approaches to employment provision.
- 5.4.3 The findings in the SA will be taken into account in the Council's decision-making process along with consultation responses and other key pieces of evidence.
- 5.4.4 As the plan-making process progresses, there may be a need to build upon the appraisal of alternatives undertaken at this stage. This may involve appraisal of individual sites for employment land. However, it is noted that a majority of the employment land needs are already being met through committed and allocated sites.



# **Next Steps**

**06**

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## **6 NEXT STEPS**

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### **6.1 Next steps**

- 6.1.1 The Council has identified a timetable for the development of the new Local Plan.
- 6.1.2 Following the focused consultation between April-June 2018, a preferred strategy will be established for the scale and distribution of development.
- 6.1.3 A range of draft policies will also be prepared in support of the strategy, which will culminate in the consultation upon a draft Local Plan in August 2018.
- 6.1.4 Further SA work will be necessary to identify the effects of the draft Plan. There may also be a need to reconsider alternatives in light of new evidence and consultation feedback.
- 6.1.5 A second interim SA Report will be prepared to document the SA findings at this next Plan milestone. The report will include the findings presented within this first interim SA Report, but will be updated and expanded upon to cover new elements of the Plan (for example policies, site options / allocations).
- 6.1.6 Feedback on the findings of this first interim SA Report will be taken into consideration in the preparation of subsequent SA Reports.



## **APPENDIX A: BREAKDOWN OF HOUSING ALTERNATIVES**

The Council has identified a range of reasonable alternatives to be tested in the SA. Each option has been appraised consistently to allow for a fair comparison. This will ultimately feed into the decision-making process about what the preferred approach should be.

The options are based primarily on housing growth and distribution and are introduced in Section 4 of this Interim SA Report. There are assumptions that employment growth is broadly dealt with through existing allocations and commitments. However, separate options have been looked at for delivering the outstanding employment needs.

Each option sets out a level of housing to be distributed to different spatial areas based upon the settlement hierarchy. The spatial locations used to identify effects are as follows:

- **Edge of Leicester Urban Area** - *Including land immediately adjacent to the boundary as well as within the wider urban areas of Birstall, Thurmaston and Syston.*
- **Loughborough / Shepshed.**
- **Service Centres** - Barrow-upon-Soar, Silesby, Quorn, Mountsorrel, Anstey.
- **Other Settlements** - *Barkby, East Goscote, Rearsby, Wymeswold, Cossington, Thussington Burton on the Wold, Newton Linford, Woodhouse Eaves, Hathern, Thurcaston, Queniborough*
- **Smaller villages and hamlets**
- **New Settlements** - *Four locations are identified at Thurcaston / Barkby / Wymeswold / Cotes.*
- **Large standalone settlement** – *Three broad opportunity areas identified to the west of Shepshed, North-east of the PUA and the east of the Borough in the open countryside.*

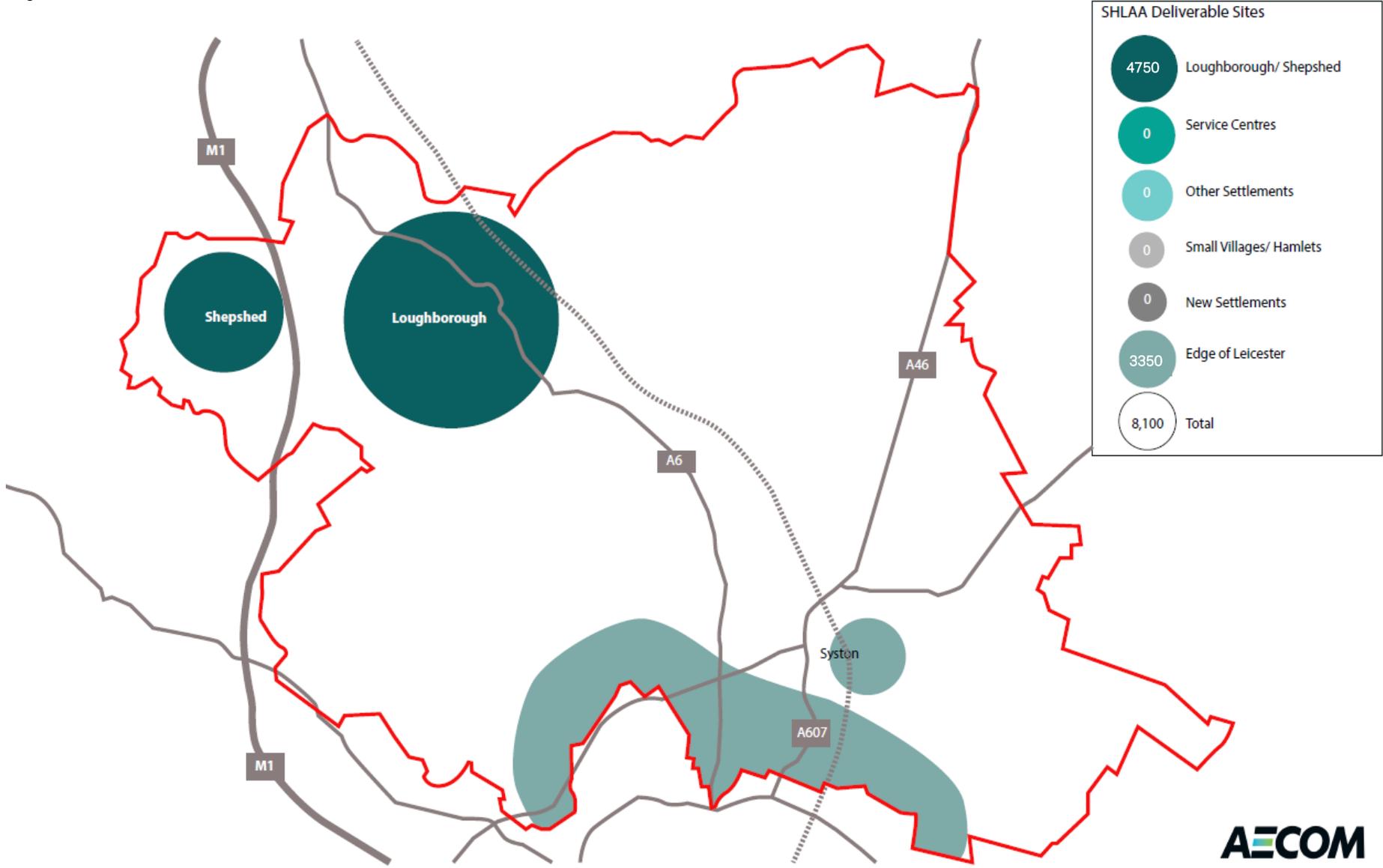
It is our intention to identify how different levels of growth would affect these areas and how that then translates into an overall picture for the borough as a whole.

<b>Scenario A - To be found figure 8,100</b>							
	Edge of Leic	Lough / Shepshed	Service Centre	Others	Hamlets	New Settlements	Total
SHLAA Capacity	3,346	8,274	4579	2966	735	3,000	22,913
A 1. Leicester & Loughborough	3350	4750	0	0	0	0	8,100
A. 2. Leicester & Loughborough + Service Centres	3350	2750	2,100	0	0	0	8,100
A3.Settlement Hierarchy distribution	3350	2100	1550	1100	0	0	8,100
A4. Proportionate	1067	3590	2458	748	235	0	8,098
A5. Leicester & Loughborough + New Settlement	3350	1,750	0	0	0	3,000	8,100
A6. Leicester & Loughborough + SC + New Settlement	3350	1000	750	0	0	3,000	8,100

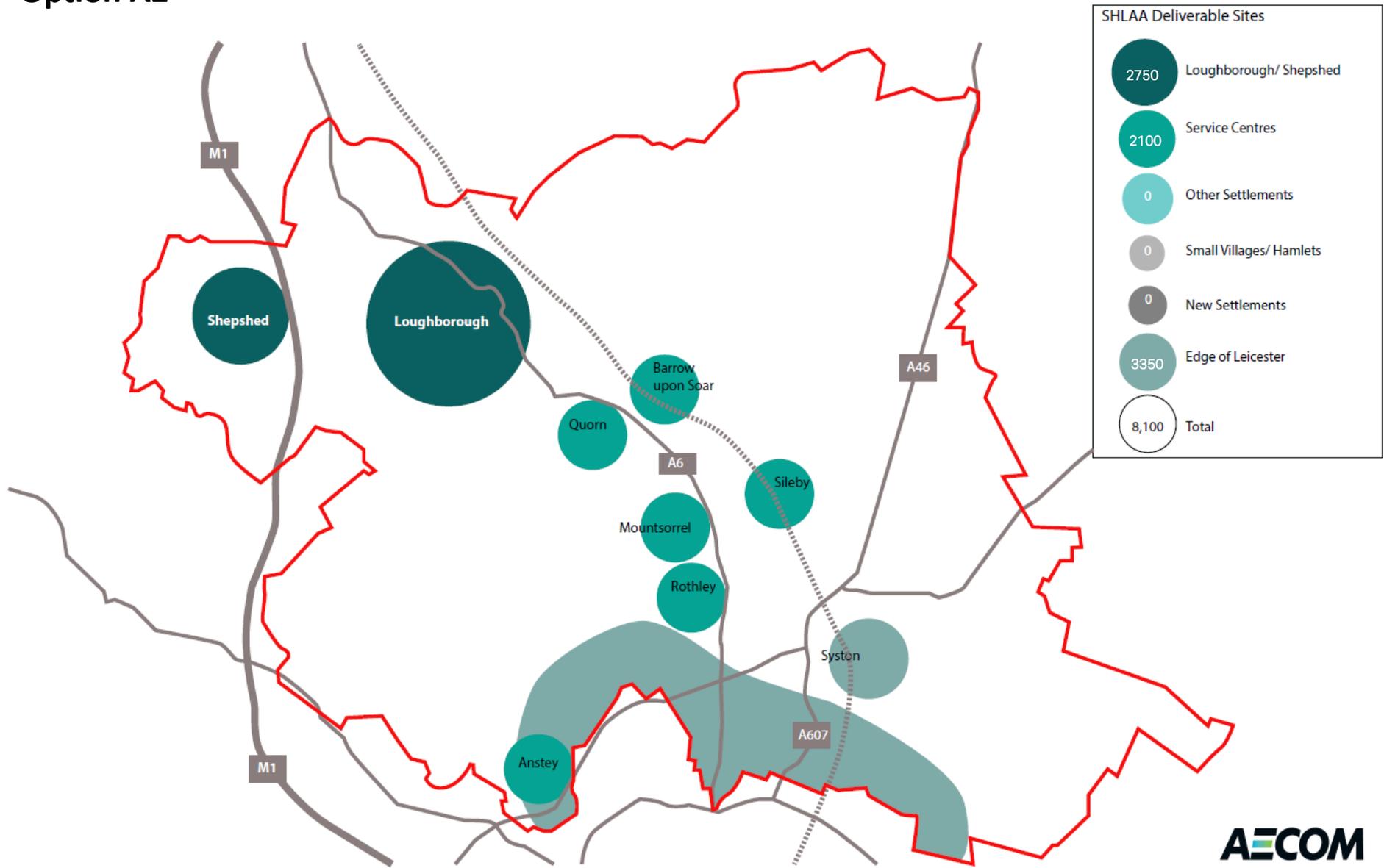
<b>Scenario B - To be found figure 15,700</b>							
	Edge of Leic	Lough / Shepshed	Service Centre	Others	Hamlets	New Settlements	Total
SHLAA Capacity	3,346	8,274	4579	2966	735	3,000	22,913
B2. Leicester & Loughborough + Service Centres	3350	8270	4080	0	0	0	15700
B3.Settlement Hierarchy distribution	3350	7000	4350	1000	0	0	15700
B4. Proportionate	2068	7050	4579	1546	457	0	15700
B 6. Leicester & Loughborough + SC + New Settlement	3350	7000	2350	0	0	3000	15700

<b>Scenario C – Standalone Settlement</b>							
	Edge of Leic	Lough / Shepshed	Service Centre	Others	Hamlets	New Settlements	Total
SHLAA Capacity	3,346	8,274	4579	2966	735	3,000	22,913
C1. Standalone new settlement	335	210	155	110	0	8000-10000	8,810 - 10,810

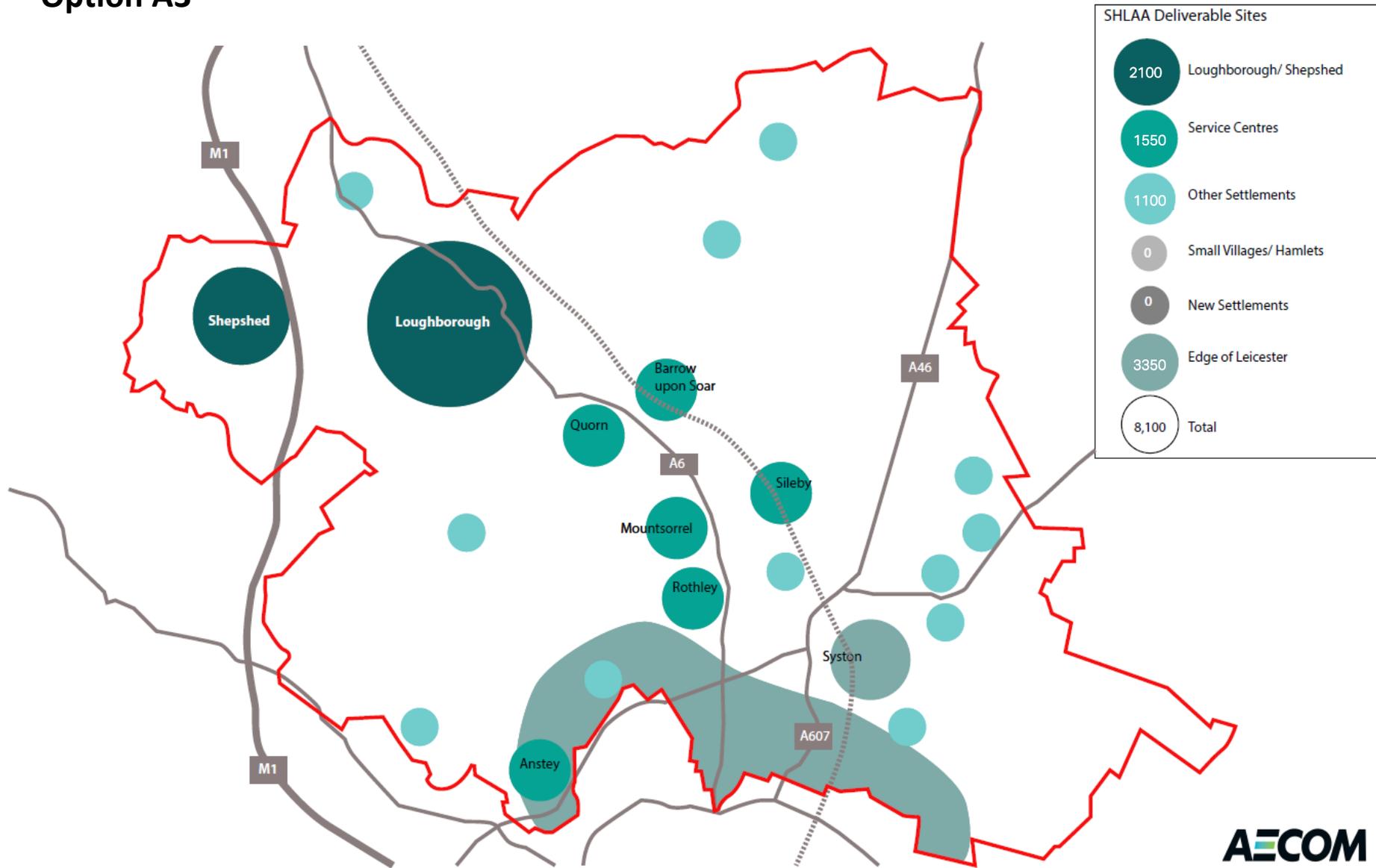
# Option A1



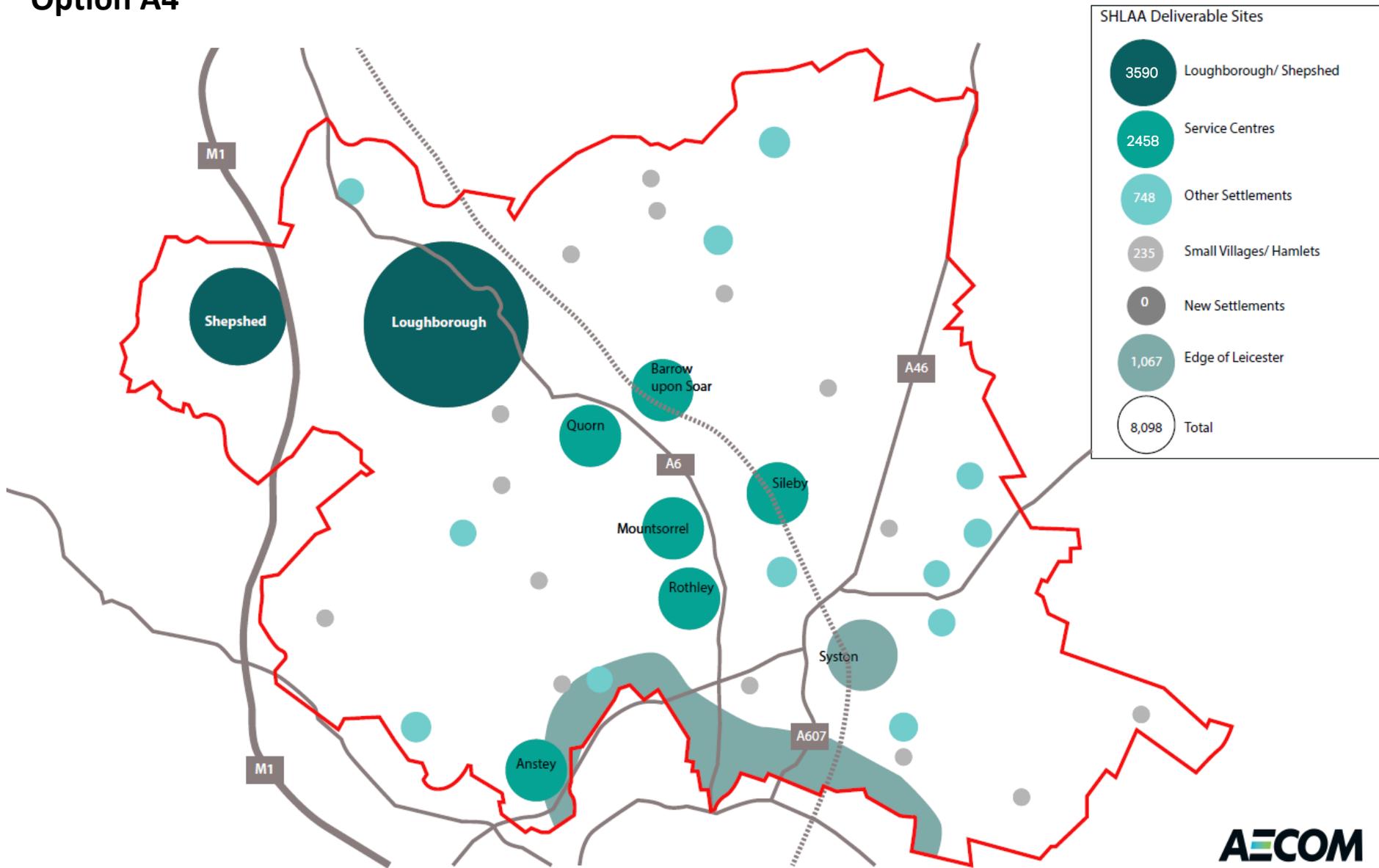
# Option A2



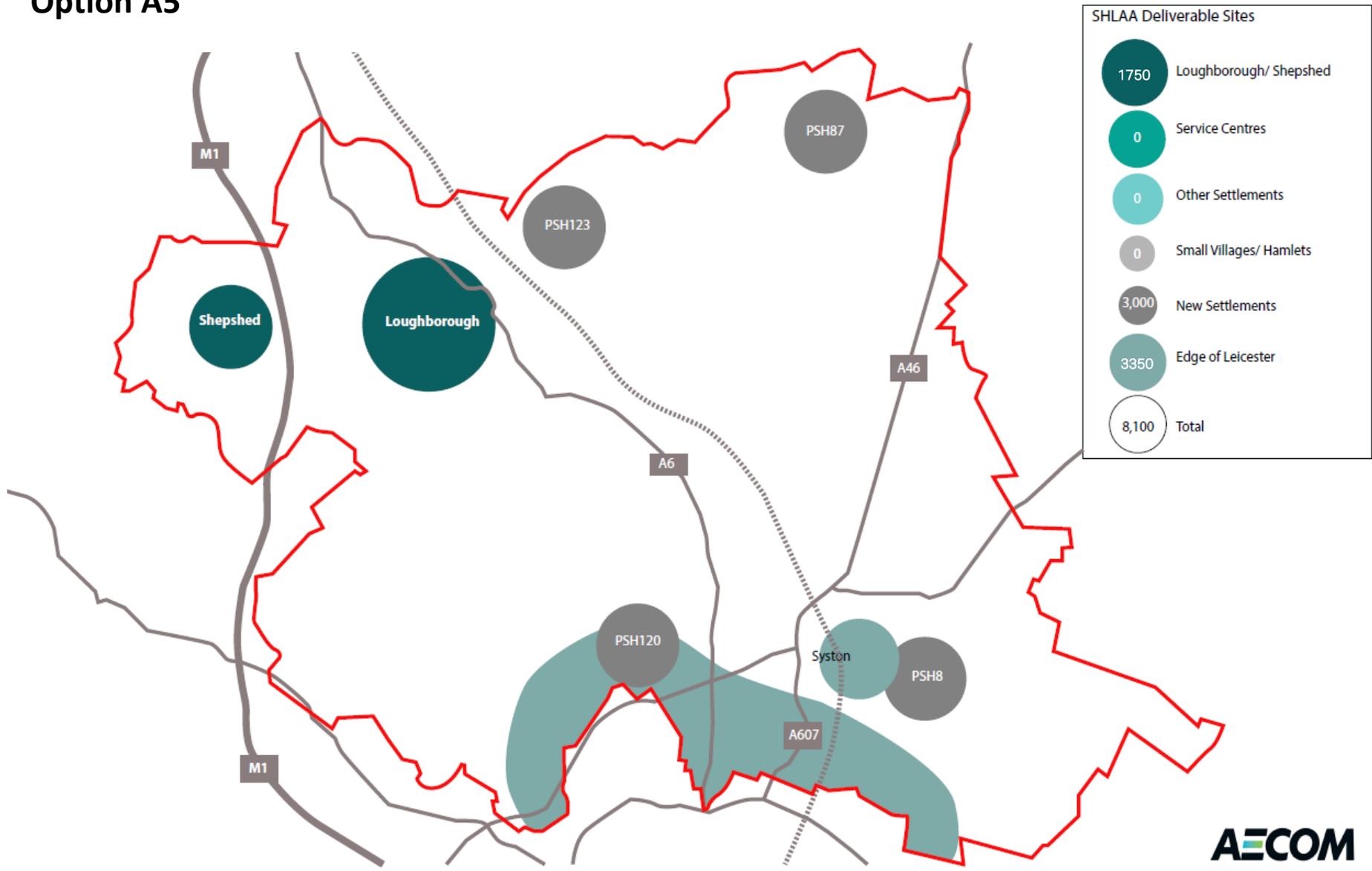
# Option A3



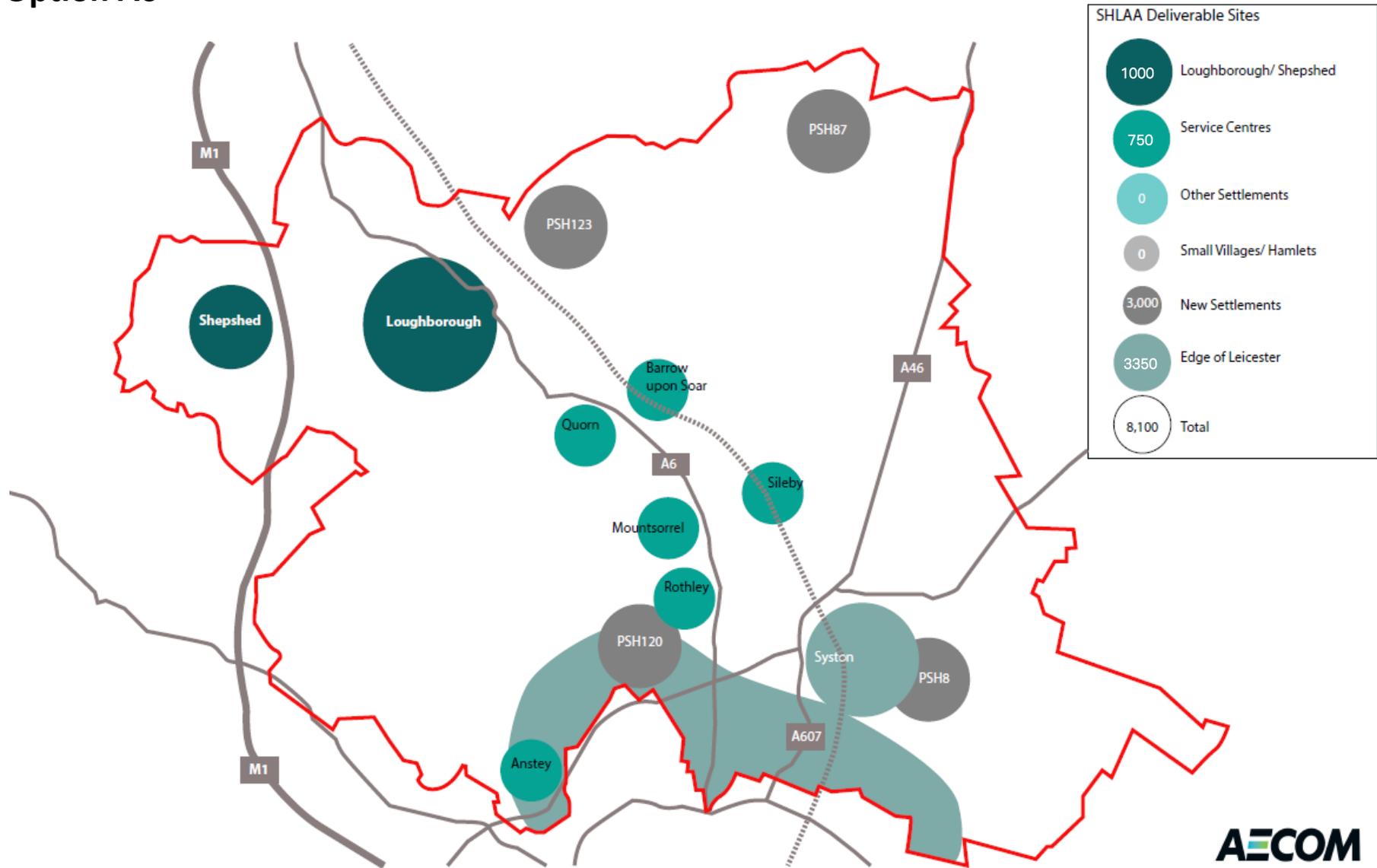
# Option A4



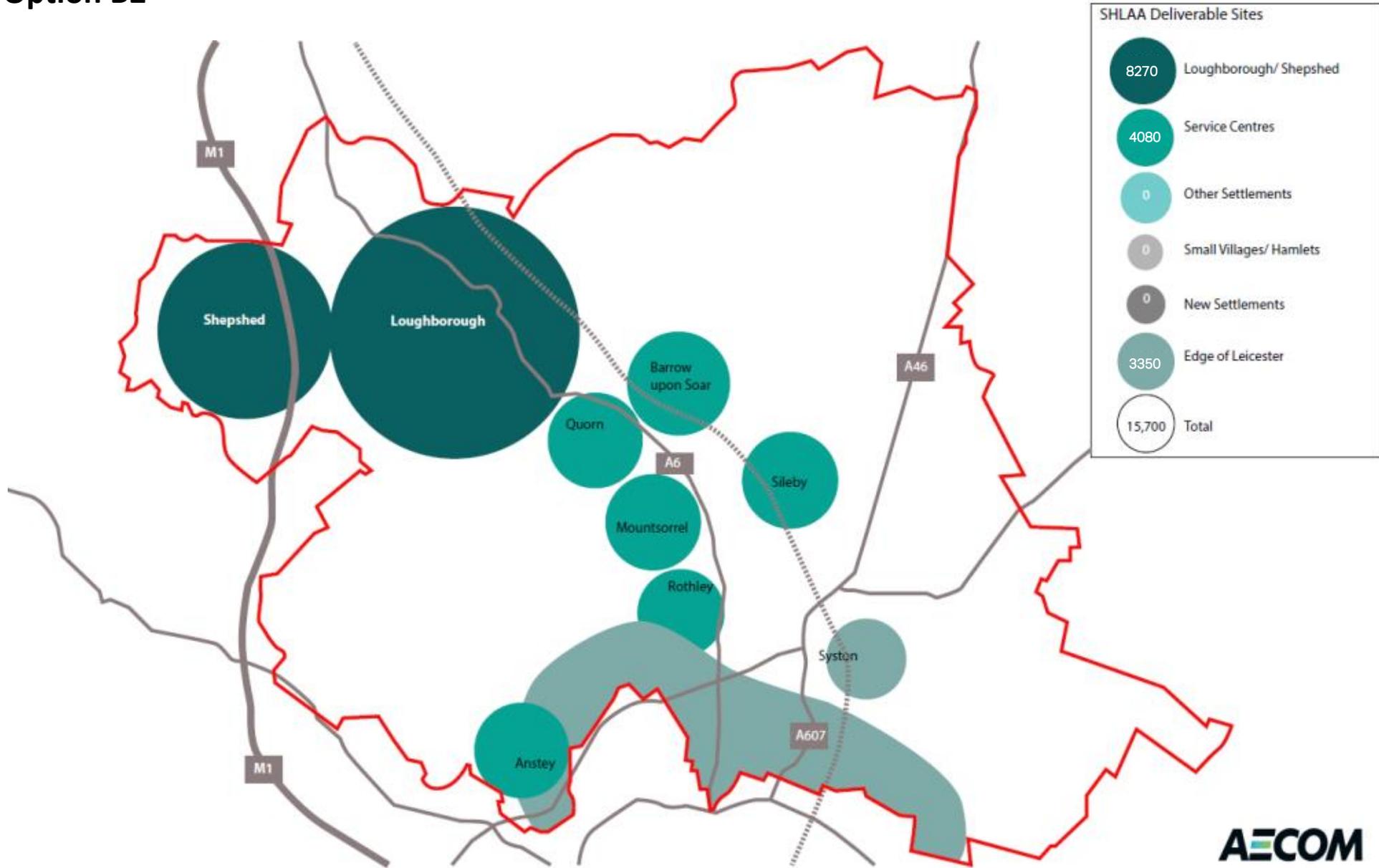
# Option A5



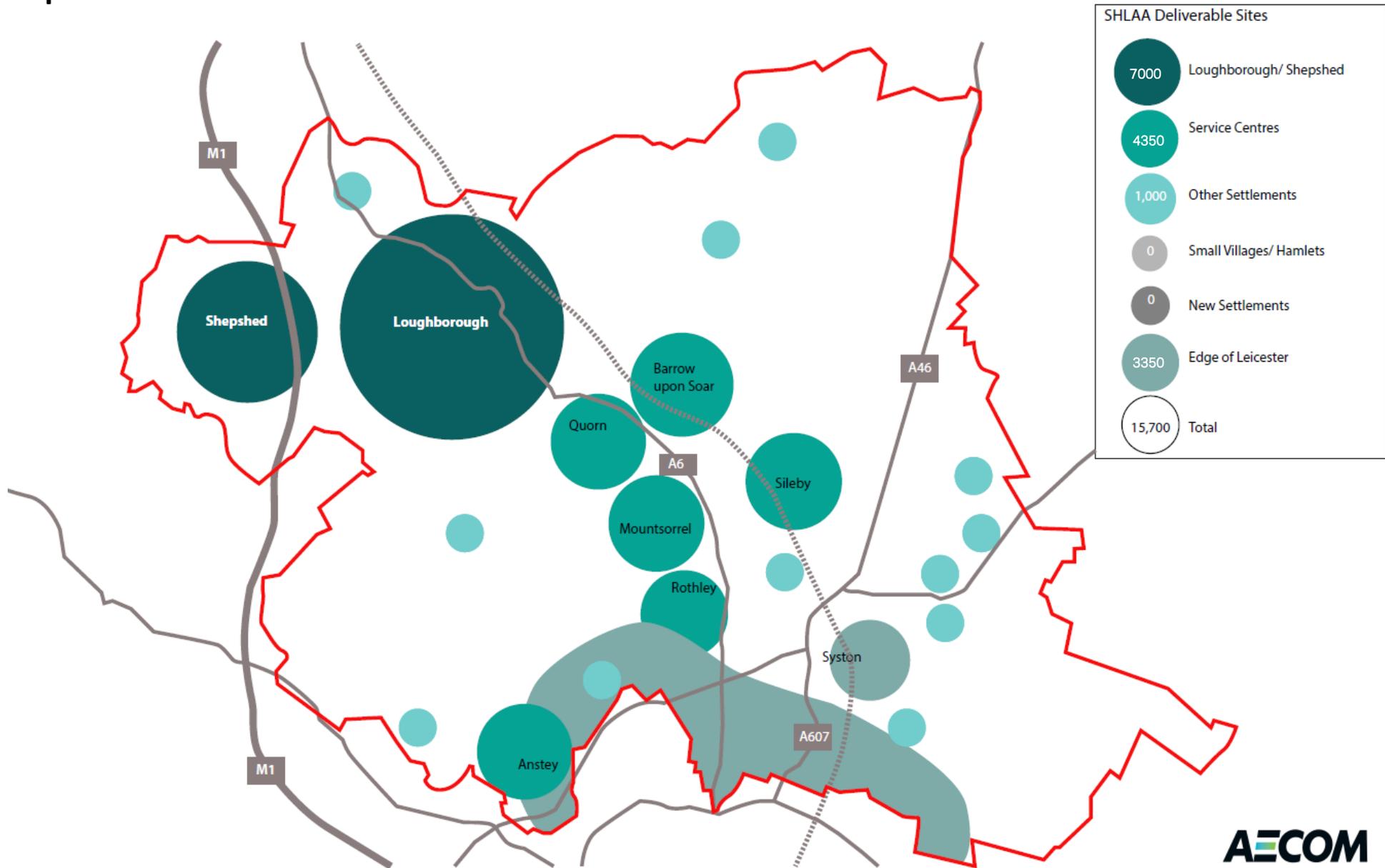
# Option A6



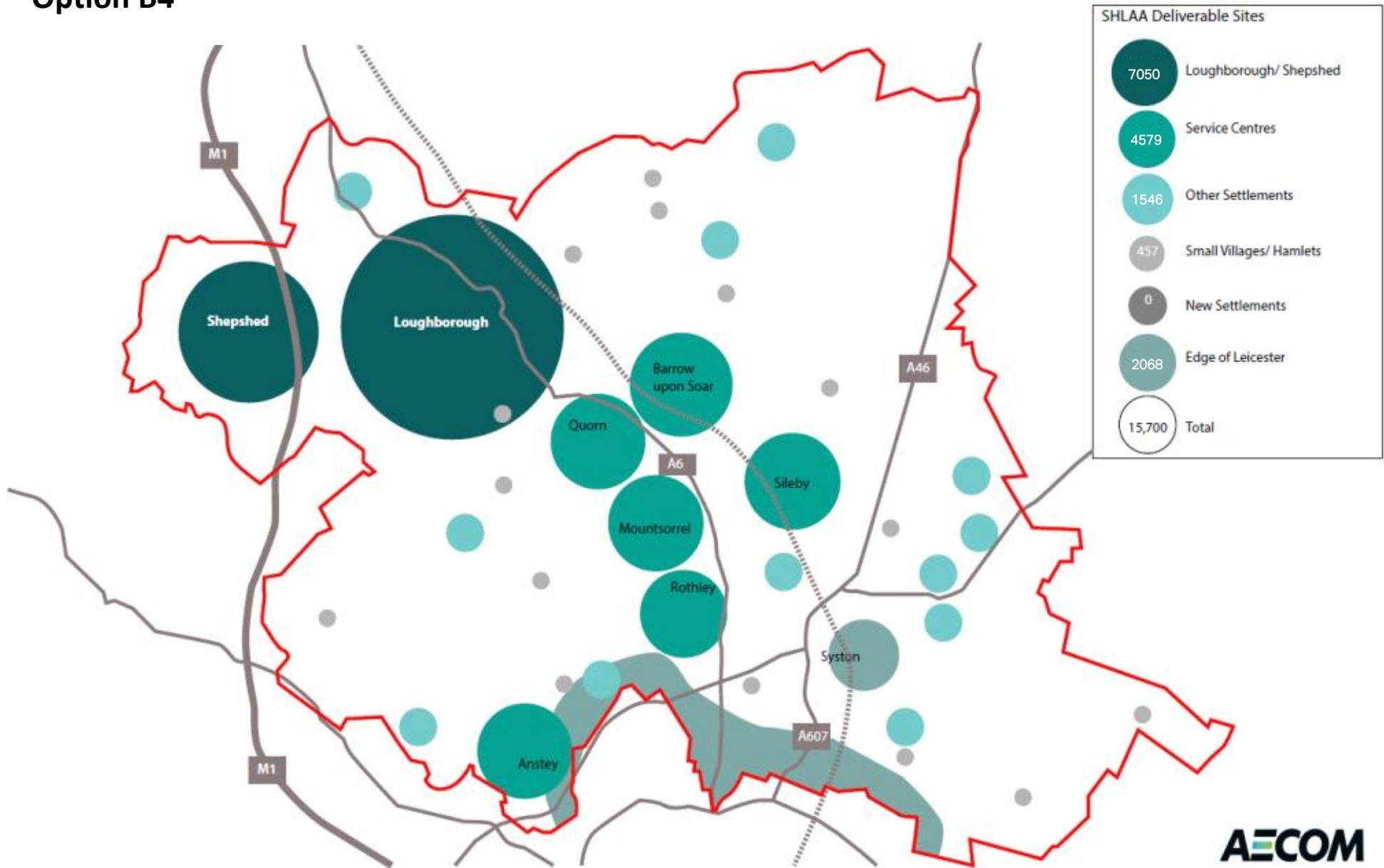
# Option B2



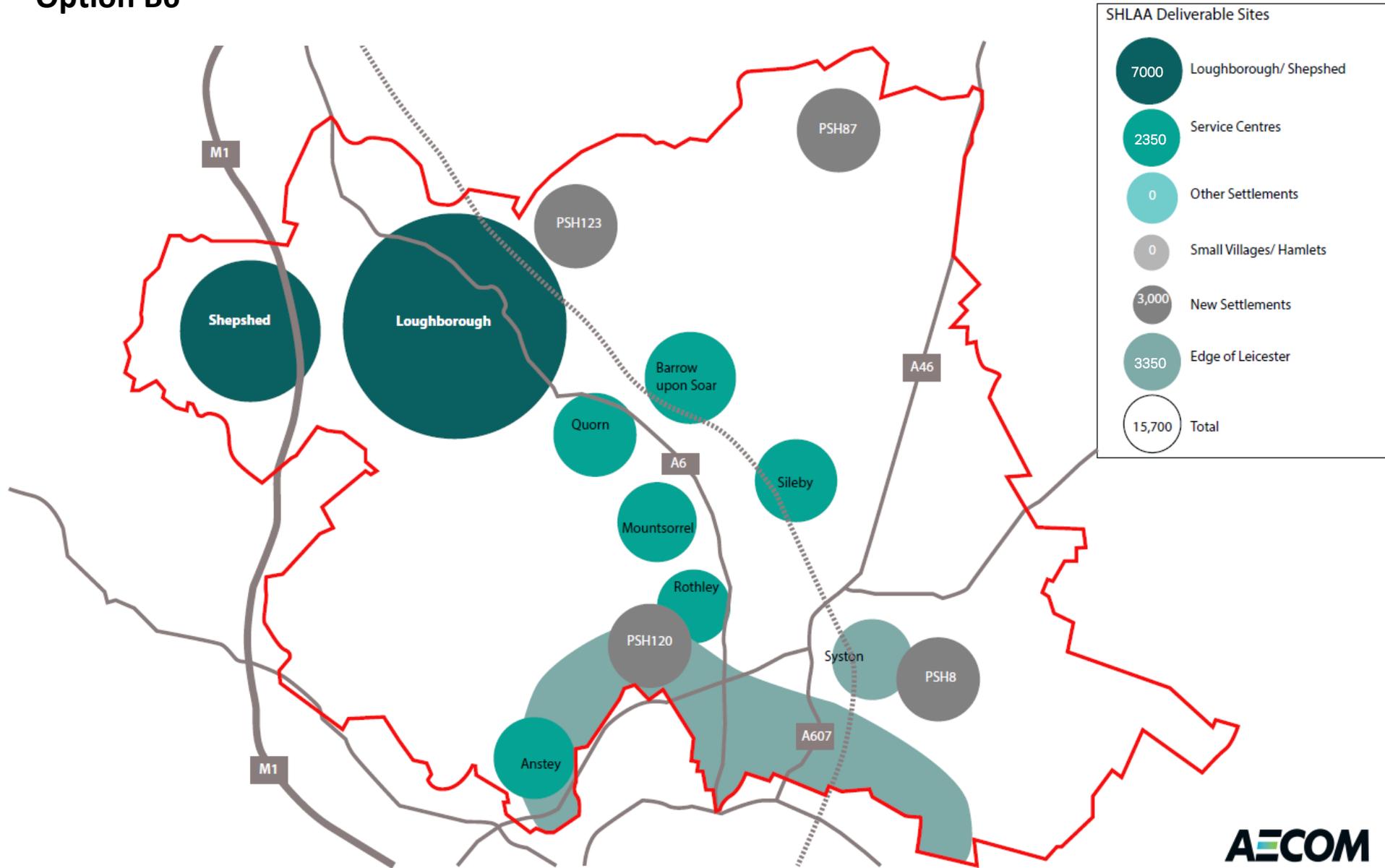
# Option B3



# Option B4



# Option B6



# Option C1



## **APPENDIX B: APPRAISAL OF ALTERNATIVES (HOUSING)**

### **Introduction**

This appendix presents the methodology and appraisal findings relating to the assessment of eleven reasonable alternative options that have been identified by the Council alongside AECOM.

Each alternative/option is introduced in Section 4 of this interim SA Report and is described in detail / illustrated on a series of map in **Appendix A**.

The options are as follows:

#### Scenario A – 8100 homes to be delivered:

- A1. Growth focused at Leicester PUA & Loughborough / Shepshed
- A2. Growth focused at Leicester PUA & Loughborough / Shepshed and Service Centres (meaning a lower level of growth at Loughborough and Shepshed compared to option 1 )
- A3. Settlement Hierarchy distribution
- A4. Proportionate distribution of development
- A5. Growth focused at the Leicester PUA & Loughborough & new settlements
- A6. Growth focused at Leicester PUA & Loughborough & Service Centres & new settlements

#### Scenario B – 15700 homes to be delivered:

- B2. Growth focused at Leicester PUA & Loughborough / Shepshed and Service Centres
- B3. Settlement Hierarchy distribution
- B4. Proportionate distribution of development
- B6. Growth focused at Leicester PUA & Loughborough & Service Centres & new settlements

#### Scenario C – Standalone new settlement

- C1. Standalone new settlement

## Methodology

The appraisal will identify and evaluate ‘likely significant effects’ on the baseline / likely future baseline associated with each alternative, drawing on the sustainability topics and objectives as a methodological framework.

The task of forecasting effects can be challenging due to:

- The high level nature of the alternatives under consideration;
- Being limited by definition of the baseline and (in particular) the future baseline;
- The ability of developers to design out/mitigate effects during the planning application stage.

In light of this, where likely significant effects are predicted this is done with an accompanying explanation of the assumptions made.<sup>2</sup>

It is important to note that effects are predicted based upon the criteria presented within the SEA Regulations<sup>3</sup>. So, for example, account is taken of the nature of effects (including magnitude, spatial coverage and duration), the sensitivity of receptors, and the likelihood of effects occurring as far as possible.

The potential for ‘cumulative’ effects is also considered. These effect ‘characteristics’ are described within the appraisal as appropriate under each sustainability topic. A table is also presented under each topic summarising the predicted effects and their characteristics (i.e. namely whether they are significant or not).

For each option, one of the following symbols has been allocated for each SA objective.

Where there is uncertainty, the nature of such effects has been identified. For example, an uncertain negative effect would be recorded if there is a chance that negative effects could occur but this is dependent upon unknown factors. It may still be possible to rule out significant effects though, and so the unknown effect may be minor or potentially significant.

Effects Significance	Effects symbol
<i>Significant positive effects</i>	++
<i>Minor positive effects</i>	+
<i>Neutral effects</i>	0
<i>Minor negative effect</i>	-
<i>Significant negative effect</i>	--

Uncertain effects	Effects symbol
<i>Uncertain significant positive effect</i>	++ <sup>?</sup>
<i>Uncertain minor positive effect</i>	+ <sup>?</sup>
<i>Uncertain effects</i>	?
<i>Uncertain minor negative effect</i>	- <sup>?</sup>
<i>Uncertain significant negative effect</i>	-- <sup>?</sup>

<sup>2</sup> As stated by Government Guidance (The Plan Making Manual, see <http://www.pas.gov.uk/pas/core/page.do?pagelid=156210>): "Ultimately, the significance of an effect is a matter of judgment and should require no more than a clear and reasonable justification."

<sup>3</sup> Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004

### Settlement level effects / overall effects

Where appropriate and possible, the effects have been broken down by the different spatial areas where they would occur (i.e. The different levels of the settlement hierarchy outlined below).

- PUA
- Loughborough / Shepshed.
- Service Centres
- Other Settlements
- Smaller villages and hamlets
- New Settlements
- Large standalone settlement

The overall effects across the borough are then identified, taking into account the effects that have been predicted in different areas across the Borough.

The overall effects are not simply determined through a process of 'adding-up' positives and negatives; rather it is a professional judgement of how significant the overall effects would be for the Borough, taking into account the effects identified locally.

For example, whilst effects might be significant at a local scale at particular settlements (for example the loss of a playing field), the effects on the baseline overall may not be significant overall should there be positive effects (enhancements) or neutral effects elsewhere across the Borough.

An explanation is given to justify the significance scores identified for each option both at the settlement level and for the borough as a whole.

### Assumptions

There are some consistent assumptions applied across the appraisals:

As there are no development sites identified for any of the options, some of the effects are not certain, but a precautionary approach has been taken to the assessment of effects.

At lower levels of growth there will be greater flexibility in the choice of sites that can be allocated to deliver the housing targets. Similarly, the availability of sites and capacity of land in different settlements will influence flexibility.

It is assumed that growth would be split relatively evenly at each level of the settlement hierarchy (for example, if 1000 homes are allocated to the service centres, each could be expected to accommodate 200 homes each). However, it is acknowledged that this may not be the case in reality dependent upon a range of other factors.

It is presumed that the majority of committed development will be built out in the plan period, and therefore forms part of the projected baseline position. The effects of the options beyond this baseline position form the basis of this appraisal.

## Landscape

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Growth at the service centres would most likely be at the edge of these settlements. The effects would depend upon the level of growth in different service centres. The broad issues and opportunities at each service centre are discussed below.

At Barrow upon Soar, development could encroach into the surrounding countryside. However, it ought to be possible to accommodate modest growth without affecting the character of the settlement significantly. There should be no significant issues of coalescence. However, at higher levels of growth, the character of the approach to the settlement could be affected negatively. Development at certain sites could also present opportunities to deliver enhancements in a green infrastructure enhancement zone<sup>4</sup>.

At Quorn, there is a potential area of separation between Quorn and Loughborough. Development here could therefore have effects on the function of this land. However, this area has been identified as having medium-high landscape capacity.

At Sileby, identified development opportunities (in combination) could be of a magnitude to significantly alter the character of the surrounding landscape. Lower levels of growth could be accommodated without encroaching into the countryside substantially.

Between Mountsorrel and Rothley (and between Rothley and Birstall) there are committed developments that could already close the gap between these settlements. Further development to the north west of Cross Hedge could contribute to further narrowing, though only marginally. There is an Area of Local Separation proposed to the west of Rothley in the gap between Rothley Ridgeway, and new development has the potential to affect the setting of these two settlements.

Development at Anstey would present an opportunity to deliver enhancements in a green infrastructure enhancement area. The landscape capacity to the east, south and south west of Anstey is classified as 'medium'. Consequently, the effects here would be anticipated to be **neutral** or perhaps positive (providing that growth was relatively modest).

For options A1 and A5, no growth would occur in the service centres, and so the effects are **neutral**.

Option A2 and A4 (to a lesser extent) would deliver the most growth to the service centres, which would be more likely to lead to negative effects. However, it should be possible to accommodate growth, even at a higher level, but minor effects on the function of the landscape could be generated where there are areas of local separation such as Quorn and between Mountsorrel / Rothley<sup>3</sup>. As described above, there is also potential for green infrastructure enhancement at several settlements<sup>3</sup>, which ought to offset the negative effects somewhat. Overall, options A2 and A4 are predicted to have a **minor negative effect**. Option A3 is predicted to have **uncertain minor negative effects** as the lower amount of growth would allow for greater flexibility and would minimise the need to encroach into Areas of Local Separation. Option A6 would deliver the lowest level of growth to settlements, and so the likelihood and the magnitude of effects occurring at any of the service centres would be lower, but still exist. Therefore, an uncertain minor negative effect is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 would deliver a much higher level of growth than any option under Scenario A. Therefore, greater amounts of greenfield land would need to be released. It may still be possible to avoid significant effects for some of the service centres given the availability of less sensitive land. However, at other settlements, significant effects could be generated. . Therefore, significant negative effects are predicted. For option B6, a **minor negative effect** is also predicted, though this would be less prominent than options B2,B3 and B4.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres as there would be a very low level of growth involved for option C1. This ought to ensure better protection for these areas, which might otherwise be subject to more substantial growth. However, the potential for enhancement through new development would be lower.

<sup>4</sup> Green Wedges, Urban Fringe, Green Infrastructure Enhancement Zones and Areas of Local Separation: Methodology and Assessment Findings Report (March 2016) ARUP on behalf of Charnwood Borough Council

## Landscape

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Development within the urban areas of Shepshed and Loughborough is unlikely to affect landscape character. However, each option would involve a degree of growth at the urban fringes. In Shepshed, the capacity of landscape is mixed, with the south being broadly classified as low capacity, whilst to the west along 'Black Brook' the capacity is determined to be medium<sup>5</sup>.

This area has also been identified as a green infrastructure enhancement zone<sup>6</sup> and development could be the mechanism for achieving such improvements. Consequently, modest growth in these locations ought to have mostly neutral effects.

To the south west of the Loughborough urban area, site options that lie adjacent to the Charnwood Forest are within zones of low and low medium landscape capacity. Development here would be likely to have negative effects upon the landscape character of the Charnwood Forest. To the south east of the urban area there are parcels of land with higher landscape capacity, but these form part of a potential area of local separation between Loughborough and Quorn. Therefore, development here may also have potential for negative effects

Option A1, which involves the highest level of growth, is more likely to encroach upon land to the south of Loughborough and / or the south of Shepshed (which are of greater sensitivity to change). Consequently, the potential for negative effects is higher. There ought to be some flexibility to avoid the most sensitive areas and to deliver lower density development as well as enhancing green infrastructure. However, a precautionary approach is taken so potential **significant negative effects** are predicted (Though there are uncertainties).

For options A2, A3, A4 and A5, the effects are likely to be of a lesser magnitude, as the amount of greenfield land release required would be lower. Therefore, it ought to be possible to avoid the more sensitive areas of landscape and / or deliver more sympathetic developments. Therefore, the effects would not be predicted to be significant. A **minor negative effect** is predicted at this stage, as it is not clear which sites would be involved.

Option A6 would involve a lower level of growth than options 1-5, and could be delivered without encroaching onto the most sensitive areas. Depending upon site location, it may also be possible to enhance green infrastructure. Therefore, An **uncertain negative effect** is predicted on balance.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Each of the options at this scale of growth would require substantial release of greenfield land around Shepshed and Loughborough. At this scale of growth it would be almost certain that the most sensitive areas of landscape could be affected and therefore **significant negative effects** are predicted. The effects would be most prominent for option B2, which involves the highest level of growth.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted as there would be a very low level of growth involved for option C1. This ought to ensure better protection for these areas, which might otherwise be subject to more substantial growth. However, the potential for enhancement through new development would be lower.

### PUA:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Growth within the PUA will lead to development in the urban areas of Thurmaston, Birstall and Syston. The effect on landscape as a result of such development is likely to be neutral given that the urban area is less sensitive to change. However, to meet the housing targets within options A1, A2, A3, A5 and A6, there would also be a need to release greenfield land on the urban fringes. This might include land classified as Green Wedge adjacent to the A5630 and / or land adjacent to existing residential areas at Hamilton. The loss of such landscape function is considered to be a minor negative effect for options A1, A2, A3, A5 and A6, which involve maximised growth in the PUA.

<sup>5</sup> Borough of Charnwood Landscape Character Assessment – July 2012

<sup>6</sup> Green Wedges, Urban Fringe, Green Infrastructure Enhancement Zones and Areas of Local Separation: Methodology and Assessment Findings Report (March 2016) ARUP on behalf of Charnwood Borough Council

## Landscape

At Syston, higher levels of growth could involve a Green Wedge and potential Area of Separation between Syston and the Leicester Urban Area (Thurmaston). At higher levels of growth, it may be necessary to encroach into this area, which could effectively lead to further coalescence of settlements. This could be a significant negative effect in this location.

A smaller scale release of land to the east of the settlement (where landscape capacity is identified as medium-high) would be less of an issue. Development at certain sites could also present opportunities to deliver enhancements in a green infrastructure enhancement zone<sup>5</sup>.

Therefore, at this stage an **uncertain significant negative effect** is predicted overall for options A1, A2, A3, A5 and A6.

For option A4, the effects are predicted to be a **minor negative effect**, as the scale of growth is such that greenfield land loss ought to be lower and easier to avoid significant effects.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve the same level of growth as options A1, A2, A3, A5 and A6, therefore an **uncertain significant negative effect** is predicted. Option B4 involves a lower level of growth and so it ought to be possible to avoid the loss of sensitive land, and the overall scale of greenfield loss would be lower. Consequently, there is more uncertainty about whether negative effects would occur.

A **minor negative effect** is therefore predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres as there would be a very low level of growth involved for option C1. This ought to ensure better protection for these areas, which might otherwise be subject to more substantial growth. However, the potential for enhancement through new development would be lower.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 and A6 do not involve growth in other settlements, and so a **neutral effect** is predicted for each. For option A3, there would be growth across the other settlements, whilst for option A4 there would also be growth at smaller villages and hamlets, so the amount at other settlements would be lower.

Development at the other settlements would have mixed effects upon landscape. At some settlements, it ought to be possible to accommodate a modest amount of development without majorly affecting the surrounding landscapes. For example at Thrussington, Burton-on-the-Wolds and to a lesser degree at Hathern.

At other settlements though, there are site development options falling with existing Areas of Local Separation. Development here would have the potential to significantly affect landscape character and contribute to coalescence of settlements. For example, development could occur on land between Rearsby and East Goscote, closing the gap between these villages. Likewise, there are a number of site opportunities that fall within an Area of Separation between East Goscote and Queniborough, and Syston and Queniborough. In combination, growth in these areas could lead to negative effects upon landscape character in these parts of the borough.

For option A3, a **potential significant negative effect** is predicted, as it might be necessary to develop in Areas of Local Separation.

For option A4, the effects in the other settlements would be lesser, and so significant effects here might be better avoided. Consequently, only **minor negative effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth at the other settlements and so **neutral effects** are predicted. Option B3 involves similar amounts of growth in the other settlements compared to option A3. Therefore, **uncertain significant negative effects** are predicted too. For B4 the level of growth is higher still, and therefore the potential for **significant negative effects** is more certain.

## Landscape

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the other settlements as there would be a very low level of growth involved for option C1. This ought to ensure better protection for these areas, but the levels of growth here would not be anticipated to be substantial anyway under the current policy approach.

### **Small Villages and Hamlets**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth is small under option A4, but in the context of these settlements, changes to the character of the landscape could be quite dramatic, reducing the rural feel. The effects would be dependent upon location, scale and mitigating measures, but in some villages within Charnwood Forest and the open countryside, there could be localised effects on landscape. Cumulatively, this is predicted to have **minor negative effects** with regards to the hamlets and villages. The effects are not predicted to be significant, as the wider landscape should remain untouched and a degree of openness would be retained.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth for B4 is twice as high compared to A4 and therefore there is greater potential for **significant negative effects** to be generated. However, this is not a certainty dependent upon where growth is located and designed. Therefore, uncertainties are recorded.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

A new settlement at Wymeswold / Hoton sits atop a plateau, and is therefore less likely to be visible from distance. Though the site sits within the countryside it is not particularly sensitive in character, and partly consists of a disused airfield. Provided that green infrastructure is incorporated into development, negative effects are unlikely to occur.

At Cotes, a large scale development would occur in the open countryside, which would be visible from a number of locations particularly along the northern parts of the River Soar Valley and could have some negative effects on landscape character. In combination with a new settlement at Wymeswold / Hoton, the rural nature of this part of the borough could be eroded. However, large areas of open space would still remain, so the effects would not be likely to be significant.

A new settlement at Barkby could have minor negative effects on landscape character, as it would alter the setting of Barkby. The landscape here is identified as broadly 'medium' capacity<sup>7</sup>, so significant effects ought to be possible to avoid. There are also green infrastructure enhancement zones nearby<sup>8</sup> which could present opportunities for improvement.

A new settlement at Thurcaston could 'close the gap' between the village of Thurcaston and the area between Birstall and Rothley (i.e. land allocated for strategic growth). Minor negative effects are predicted.

In combination, development at the new settlements (options A5 and A6 only) is predicted to have a **minor negative effect**. This reflects the potential for minor negative effects at Thurcaston and Barkby, but the lower likelihood and magnitude of negative effects occurring in Wymeswold and Cotes.

As large scale strategic developments, each of the new settlements could also have the potential to incorporate substantial amounts of green infrastructure, which ought to help mitigate negative effects and secure enhancements.

<sup>7</sup> Borough of Charnwood Landscape Character Assessment – July 2012

<sup>8</sup> Green Wedges, Urban Fringe, Green Infrastructure Enhancement Zones and Areas of Local Separation: Methodology and Assessment Findings Report (March 2016) ARUP on behalf of Charnwood Borough Council

## Landscape

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B6 involves the same level of growth as options A5 and A6 and is therefore also predicted to have a **minor negative effect**.

Options B2, B3 and B4 are predicted to have **neutral effects** as there would be no growth at new settlements.

### Scenario C (Discussion of options for delivering a standalone large settlement)

The effects of a new settlement would be dependent upon the location. However, regardless of the area that a new settlement is located, there would be a substantial loss of green space and a total change in terms of the character of the area. The extent of effects would depend upon the sensitivity of the landscape to change and the potential for mitigation and enhancement. To the west of Shepshed a new settlement would only be separated from the town by the Black Brook, and so the open nature of the countryside in this location would be eroded.

To the east of Loughborough in the open countryside development would take place within 'the Wolds' character area, which is elevated and has a remote atmosphere<sup>6</sup>. The strength of the character and its current condition is considered moderate. The potential for the remoteness of the area to be eroded should be taken into account, as well as the elevated nature of some areas. A new settlement would be expected to be designed with extensive landscaping, but nevertheless negative effects are likely.

To the north east of the PUA in the 'High Leicestershire' character area the landscape character is considered to be strong, with a sense of remoteness and little modern expansion.

Development of a large new settlement would be likely to significantly alter the countryside in this location and so significant negative effects are possible.

### **Overall effects**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Option A1 is predicted to have negative effects in Loughborough / Shepshed and the PUA (which could potentially be significant in these locations depending upon sites developed). However, there are neutral effects predicted at all other settlements across the borough, which helps to 'offset' the effects at Loughborough, Shepshed and the PUA from a borough-wide perspective. Consequently, only a **minor negative effect** is predicted overall.

Option A2 is also predicted to have a **minor negative effect** overall. However, the negative effects in Loughborough would be lower, and would be generated at the service centres to a greater extent compared to option A1.

Option A3 could generate significant negative effects for the other settlements, and potentially significant negative effects at the PUA (but there are uncertainties dependent upon the sites that are developed). The likelihood of negative effects occurring at the service centres and Loughborough is lower though. Overall, the **effects are considered to be significant**, as there could be negative effects at multiple settlements across the district, and in some areas these could be significant.

Option A4 is predicted to have **significant negative effects** overall. Though no significant effects are predicted in any particular settlement, there are minor negative effects across all the settlements in the borough. Cumulatively, this is considered to be significant, as the overall character of the borough as a whole would be likely to decline.

Options A5 and A6 are predicted to have **minor negative effects** overall. The effects would be mostly neutral, or potentially minor for the majority of the borough, but potential significant effects are predicted at the PUA. On balance, the effects are predicted to be minor from a borough-wide context.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 is predicted to have a **significant negative effect** overall. The effects in Loughborough would likely be substantial given the need to develop adjacent to Charnwood Forest and the loss of a number of sites at the urban fringe

The effects at Loughborough would still be significant for Option B3, but to a lesser extent than option B2. However, this option would also generate significant negative effects at the other settlements, and potential significant negative effects at the PUA and the service centres.

## Landscape

A **significant negative effect** is predicted overall, with this option also performing worse than option B2.

Option B4 would have similar effects to option B3, though the effects at the PUA would possibly be lower. A **significant negative effect** is still predicted.

Option B6 is also predicted to have a **significant negative effect** overall. Again, effects at Loughborough would most likely be significant, but there would also be minor negative effect at the service centres and at new settlements. Given that two new settlements would be close to the PUA (Barkby and Thurcaston), there could also be cumulative effects on landscape in these areas.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Overall, Option C1 would avoid negative effects upon landscape character across much of the Borough. This is positive in respect of the prevention of coalescence between settlements and urban areas, the protection of Charnwood Forest and the character rural settlements. However, a large new settlement would generate negative effects on landscape character, which could be significant depending upon the location. Overall, a minor negative effect is recorded. Whilst there is potential for more profound effects in a specific area, this would be offset somewhat by protection across a range of other sensitive landscapes.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A - 8,100 homes</b>							
A1: Urban intensification	0	--?	--?	0	0	0	-
2A. Urban focus	-	-	--?	0	0	0	-
A3. Settlement Hierarchy	- ?	-	--?	--?	0	0	--?
A4. Proportionate growth	-	-	-	-	-	0	--
A5. Urban intensification and new settlement	0	-	--?	0	0	-	-
A6. Urban focus and new settlement	- ?	- ?	--?	0	0	-	-
<b>Scenario B - 15,700 homes</b>							
B2. Urban focus	--	--	--?	0	0	0	--
B3. Settlement Hierarchy	--	--	--?	--?	0	0	--
B4. Proportionate growth	--	--	-	--	--?	0	--
B6. Urban focus and new settlement	-	--	--?	0	0	-	--
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0		--	-

## Biodiversity and nature conservation

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 do not propose growth in the service centres, and therefore effects are predicted to be **neutral**. For option A4, and to a lesser extent options A2 and A3, there would be growth at the service centres. Assuming a relatively even distribution of growth between the service centres, there is potential for negative effects on biodiversity in some settlements. This could be localised effects on wildlife through the loss of trees and hedges for example, or could be disturbance to designated habitats and ecological networks. Whilst there would be unlikely to be direct effects on designated sites in / around any of the service centres, growth along the Soar Valley could potentially disturb species movement and / or impact the wildlife corridor function of the Soar Valley. This is more likely on developments that are closer to sites of local nature importance and SSSIs, such as close to Quorn and Mountsorrel. Conversely, growth in Sileby is less likely to have significant effects on designated sites. The quantum of growth under option A4 could lead to negative effects due to the need to release a greater number of sites for development. The effects would be less prominent for Options A2 and A3, as the overall level of growth at each settlement would be lower. Nevertheless, a **minor negative effect** is still predicted. For option A3, the level of growth is sufficiently lower, that negative effects would be less likely to occur. Therefore only an **uncertain minor negative effect** is predicted. For option A6, the effects are predicted to be **neutral** as there would be greater scope to avoid sites in close proximity to sensitive habitats, and the level of growth would be less likely to put pressure on ecological networks.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B6 would involve approximately the same level of growth as option A4, and thus a **minor negative effect** is predicted. Options B2, B3 and B4 all involve substantially more growth along the Soar Valley at the Service Centres. This could put additional pressure on biodiversity by disturbing ecological corridors. The potential for significant negative effects therefore exists, but it ought to be possible to mitigate effects by ensuring that growth implements green infrastructure. In line with the precautionary principle, options B2, B3 and B4 are therefore predicted to have **significant negative effects**.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres as there would be a very low level of growth involved for option C1. This ought to ensure better protection for biodiversity as there would be less disturbance and loss of greenspace. However, the potential for enhancement through new development would be lower too.

### Loughborough / Shepshed:

#### Scenario A (Discussion of options for delivering 8,100 homes)

For option A1, the level of growth is the highest (for scenario A), and could potentially necessitate the release of land in the more sensitive areas. This might include sites in Shepshed and development adjacent to the Charnwood Forest (part of which is also a woodland SSSI). The potential for effects here would be significant, as there could be disturbance to species (light), increased visitor pressure and the potential to fragment habitat. However, this level of growth still allows for some flexibility in site choice and low density sensitive development. Therefore, a **minor negative effect** is predicted.

The next highest growth option under this scenario (Option A2 and A4) would allow more choice over the potential sites to be developed to meet this need. This would perhaps allow the more sensitive sites (to the south west of Loughborough) to be avoided. However, there would still be a need to develop sites in the urban area of Loughborough as well as a variety of sites around Shepshed. Development within the inner core of Loughborough would not be anticipated to have negative effects on biodiversity, as there are no major sites or ecological networks in this area. However, there are sensitivities on the urban area of Shepshed. For example, growth along the Black Brook could affect water quality and / or disturb species reliant upon the water environment. Likewise, development to the south of Shepshed is adjacent to Newhurst Quarry SSSI, and could potentially affect habitats that species utilise. It may be possible to mitigate effects at this level of growth by site avoidance, low density development with elements of green infrastructure. Therefore, **uncertain minor negative effects** are predicted.

The level of growth under options A3, A5 and particularly A6 would allow the more sensitive sites to be avoided, or lower density (more sympathetic) developments to be created. Therefore, options 3 and 5 (involving between 1750-2100 dwellings) are predicted to have **neutral effects**. For option A6, **neutral effects** are predicted as the level of growth is very low.

## Biodiversity and nature conservation

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 would involve maximising sites in Loughborough.

This would require the release of land at sensitive areas including adjacent to Charnwood Forest and along the Black Brook. It may be more difficult to implement low density sensitive design at this scale of growth, and cumulative effects would be more prominent. Consequently, a **significant negative effect** is predicted. Options B3, B4 and B6 would involve a slightly lower level of growth compared to option B2 (1500 less), but this is still substantially more than for any options under scenario A. It may be possible to achieve slightly more sensitive developments through densities and avoidance, but the effects are still likely to be significant (though less so than option B2).

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for Loughborough / Shepshed as there would be a very low level of growth involved for option C1. This ought to ensure better protection for biodiversity as there would be less disturbance and loss of greenspace. However, the potential for enhancement through new development would be lower too.

### **PUA:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 all propose the delivery of 3350 homes. The likely location of sites would be within and adjacent to the Leicester Urban Area, such as within Thurmaston and adjacent to the City boundary adjacent to the A46. There would also be fairly substantial growth at Syston. The location of the site options in these areas is unlikely to have a significant effect upon designated sites. However, the location of some sites along the River Soar valley (near to Watermead Country Park) could potentially cause disturbance to habitats and species here. These **minor negative effects** are not predicted to be significant given the spread of sites and proximity to sensitive habitats.

Option A4 proposes a lower level of growth, which ought to allow for greater flexibility in the choice of sites, or the application of lower density development. Therefore, a **neutral effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 would have the same effects as options A1, A2, A3, A5 and A6 given that the level of growth is the same. Minor negative effects are predicted. Option B4 proposes double the amount of growth as option A4 (with both options being based on proportionate growth). This presents a greater opportunity for effects, but it is likely they could still be avoided or mitigated. Therefore an **uncertain negative effect** is predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA as there would be a very low level of growth involved for option C1. This ought to ensure better protection for biodiversity as there would be less disturbance and loss of greenspace. However, the potential for enhancement through new development would be lower too.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only options A3 and A4 involve growth in 'other settlements'. Therefore, there are **neutral effects** predicted for each of the other options (A1, A2, A5, A6). Assuming a relatively even split amongst the settlements, it is likely that growth could be accommodated in most locations without having significant effects on biodiversity. This is the case for Barkby, East Goscote, Rearsby, Wymeswold, Cossington, Thussington and Burton on the Wolds. However, for other settlements there is potential for negative effects due to the potential to disturb habitats in the Charnwood Forest (Newton Linford, for example), or the potential to fragment ecological corridors through the Soar Valley (Thurcaston, Queniborough). For option A3 a **minor negative effect** is predicted overall.

For option A4, the level of growth at other settlements would be slightly lower, with housing dispersed further to smaller villages and hamlets. This spreads the negative effects somewhat and so it ought to be possible to better avoid negative effects. Overall, an **uncertain (negative) effect** is predicted for A4, as the avoidance of effects would be dependent upon the sites selected and the form of development.

## Biodiversity and nature conservation

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 do not involve growth in these settlements, and so **neutral effects** are predicted.

Option B3 would involve similar growth to option A3 at the other settlements, and thus the effects are predicted to be the same (**minor negative effect**). Option B4 involves double the growth compared to option A4 at both the other settlements and the smaller villages and hamlets. Therefore, the effects are more likely to occur and a **minor negative effect** is predicted (rather than an uncertain effect at the lower scale of growth under option A4).

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the other settlements as there would be a very low level of growth involved for option C1. This ought to ensure better protection for biodiversity as there would be less disturbance and loss of greenspace. However, the potential for enhancement through new development would be lower too.

## Small Villages and Hamlets

### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth is very small under option A4, and if spread across the small villages and hamlets should not have any significant effects on biodiversity. The effects would be dependent upon location, scale and mitigating measures, but in some villages within Charnwood Forest and along the Soar Valley, there could be localised effects on species and habitats. The magnitude of effects is very low though, so it is uncertain whether effects would occur in reality (as well as there being potential flexibility in the choice of sites. Consequently, a **neutral effect** is predicted in the context of the baseline position for option A4.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth for B4 is still small in the context of the overall amount of development across the borough, and so effects are unlikely to be significant. However, at a higher scale of growth, the potential for localised impacts could be increased. An **uncertain negative effect** is predicted, as it is unclear which settlements would grow.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

## New / expanded settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Only options A5 and A6 involve new settlements. The effects are therefore **neutral** for options A1, A2, A3, A4.. The effects for options A5 and A6 are the same, as each would involve the same level of growth at new settlements (i.e. 3000 dwellings). There is an assumption for options A5 and A6 that new settlements could be delivered at Cotes, Wymeswold, Thurcaston and Land East of Barkby. At Barkby and Wymeswold, effects on designated sites are unlikely given the relative distance from these sites. Whilst there could be some localised effects on wildlife, it is probably that these could be avoided or mitigated, particularly given the size of the new settlements (which would allow for an element of green infrastructure enhancement. At Thurcaston, the new settlement could potentially intersect an ecological corridor running along Rothley Brook. However, if carefully laid out and designed (with GI enhancement) it ought to be possible to avoid significant negative effects. Nevertheless, an **uncertain (negative) effect** is predicted to reflect the reliance upon these factors.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B6 involves a new settlement, and the level of growth is the same as options A5 and A6. The effects are the same (Uncertain negative effects). Options B2, B3 and B4 would have **neutral effects**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

The effects of a new settlement will be dependent on the location of such development. At this stage, the location has not been determined, but there are broad areas identified as potentially suitable.

## Biodiversity and nature conservation

A discussion of potential effects in these areas is presented here.

To the west of Shepshed, the effects on designated sites are unlikely to be significant given their proximity and the nature of development (which would likely involve enhancement).

However, the site would most likely be adjacent to the designated area of the Charnwood Forest. There may be potential for localised effects on biodiversity here. Conversely, there may be opportunities to improve linkages to the Charnwood Forest and deliver enhancements. Should a new settlement be located to the east of the borough in the open countryside, the potential for impacts upon designated sites would be relatively low. Whilst there may be localised effects in terms of a large scale loss of greenspace and disturbance to local biodiversity, the development of a new settlement would likely incorporate garden village principles and involve enhancement measures. Therefore, the residual effects in this area may be anticipated to be neutral. To the north east of the PUA, a settlement here could similarly avoid designated habitats. Again, there would be potential for localised impacts, for example the loss of hedgerows, trees and effects on watercourses. However, there should be potential for enhancement in this location too. It is not possible to provide an accurate assessment of the effects for this option without knowing the location of the new settlement. However, by considering these broad areas, it can be concluded that the effects would most likely be minor negative at the worst, and may be minor positive. At this stage, a **neutral effect** is considered appropriate, but with the caveat of uncertainty.

### Overall effects

Option A1 is predicted to have neutral effects in service centres and smaller settlements across the Borough. However, due to the focused growth at Loughborough and Shepshed there is potential for significant negative effects upon habitats and species at Charnwood Forest and Black Brook. In addition, there are potential minor negative effects upon the Soar Valley through a focus on the PUA. Overall, a **significant negative effect** is predicted for this option. Although there are neutral effects in some locations, the potential disturbance of one of the most sensitive habitats in the borough is predicted to be significant.

Option A2 is predicted to have minor negative effects at service centres in several parts of the borough. This reflects the potential for disturbance along the River Soar and severance of ecological networks. Minor effects are also predicted as there is potential for localised effects on biodiversity near Loughborough/Shepshed and the PUA. Overall, the effects are predicted to be **minor** overall. There would be no significant effects in any one part of the borough, and the effects on wildlife in each of the different areas could possibly be mitigated, and are not likely to lead to cumulative effects due to linkages between settlements.

Option A3 is predicted to have minor negative effects or uncertain negative effects across much of the district. Though there would be effects across a wider range of location, these are not predicted to be significant, nor would they be likely to generate a significant negative effect when considered in combination. Therefore, a **minor negative effect** is predicted overall.

Option A4 is predicted to have similar effects to option A3, though the dispersal of growth to other settlements could help to reduce the potential for effects at the PUA and at the other settlements. Though minor negative effects are predicted at the service centres, the effects for the rest of the district are either neutral, or potential exists to mitigate effects. Therefore, the overall picture for the Borough is an **uncertain minor negative effect**.

Options A5 and A6 are predicted to have **uncertain minor negative effects** overall. Each would have minor negative effects on the PUA but neutral effects across the rest of the borough. The effects of new settlements ought to be lower given that green infrastructure enhancements ought to be possible to attain and the sensitivity of habitats are relatively low. Therefore, the overall picture for the borough is not likely to be negative.

Options B2, B3, B4 and B6 are all predicted to have **significant negative effects** overall. The level of growth in Loughborough and Shepshed under each option could generate significant effects, particularly for option B2. Similarly, the increased level of growth along the Soar Valley at Service Centres could have significant effects in these locations for options B2, B3 and B4. Along with minor negative effects occurring in the PUA and / or other settlements, the cumulative effects are also significant. Though these options could all generate significant effects, they can be differentiated on the severity of the effects / likelihood of occurrence. Option B2 is most likely to have the greatest negative effects in Loughborough, whilst option B3 would have widespread effects across the greatest number of settlements. Option B6 perhaps performs the best as it would not involve significant effects at service centres, whilst the other three would.

The effects for C1 are difficult to predict accurately without a firmer understanding of the location of development. However, looking at potential areas for a new settlement, negative effects would be unlikely for two of the locations, and only minor for another. It is also assumed that enhancement would form a key principle of development. Consequently, a **neutral effect** is predicted at this stage (but with uncertainties).

## Biodiversity and nature conservation

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	-	-	0	0	0	-
A2. Urban focus	-	-?	-	0	0	0	-
A3. Settlement Hierarchy	-?	0	-	-	0	0	-
A4. Proportionate growth	-	-?	0	-?	0	0	-?
A5. Urban intensification and new settlement	0	0	-	0	0	-?	-?
A6. Urban focus and new settlement	0	0	-	0	0	-?	-?
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	--	--	-	0	0	0	--
B3. Settlement Hierarchy	--	--	-	-	0	0	--
B4. Proportionate growth	--	--	-?	-	-?	0	--
B6. Urban focus and new settlement	-	--	-	0	0	-?	--
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0	0	?	?

## Water environment: Water quality

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 do not propose growth in the service centres, and therefore effects are **neutral**. For options A2 and A4, and to a lesser extent options A3 and A6, there would be growth at the service centres and this could impact on the Soar Valley, in particular the River Soar, with Quorn, Barrow upon Soar, Mountsorrel and to a lesser extent Sibleby all in close proximity. The proximity of these settlements to the corridor could increase run off into the watercourses, in particular during construction, increasing the risk of contamination and reducing water quality. Similarly with more development in option A4 in Anstey, there is pressure on Anstey and Rothley Brook, therefore the proximity of development could cause similar issues. The effects are predicted to be **minor negative** for options A2, A3 and A4 and **neutral** for option A6 (which involves the least growth).

Where actively used agricultural land is changed to residential uses, this could have positive effects upon water quality as there may be less run-off of nitrates. These effects are uncertain though.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option A4 would have the very similar effects as option B6, given that the level of growth would be very similar. Options B2, B3 and B4 however would lead to substantially more growth in the service centres, which could exacerbate potential effects on water quality (due to construction) in the short term. In the longer term however, the effects are unlikely to be significant as water infrastructure would need to be upgraded and the change in land use from agricultural to residential could help to reduce pollution somewhat. There would also be a need to consider SuDs in new developments. Therefore, only **minor negative effects** are predicted for options B2, B3, B4 and B6.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres as there would be a very low level of growth involved for option C1. This ought to reduce the potential for polluting activities and demand for water resources.

### Loughborough / Shepshed:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A4 would involve the most development, with the additional population to the area potentially having an effect on water quality in the short term, as drainage and sewage facilities may need to be upgraded to cope with additional waste water and surface water run-off. The effects are not considered to be significant, as there will be a requirement for waste water facilities and SUDs to manage the potential effects of new development. Potential contamination to watercourses during construction could also be an issue, as described for the service centres.

Where actively used agricultural land is changed to residential uses, this could have positive effects upon water quality as there may be less run-off of nitrates. These effects are uncertain though.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 (in particular), B3, B4 and B6 would all lead to substantially greater amounts of growth compared to any of the options in scenario A. The potential for short term effects on water quality due to construction could be exacerbated, though it would be expected that mitigation would be secured to ensure that effects are not significant. There is likely to be a need to enhance waste water and drainage infrastructure to support this level of growth. **Minor negative effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the Loughborough / Shepshed as there would be a very low level of growth involved for option C1. This ought to reduce the potential for polluting activities and demand for water resources.

### PUA:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 all propose the delivery of 3350 homes. The likely location of sites would be within and adjacent to the Leicester Urban Area, such as within Thurmaston and adjacent to the City boundary adjacent to the A46. There are waterbodies around the River Soar and in the lakes around Leicester Marina and Watermead Country Park to the east of Thurmaston.

## Water environment: Water quality

Whilst these waterbodies are unlikely to be significantly affected, development of sites in close proximity such as the industrial estate or Mill Lane Car Park, would need to ensure effective mitigation. Development which changes to residential from the existing employment uses over the longer term, could potentially bring benefits to water quality as residential development once constructed is less likely to be polluting.

Where actively used agricultural land is changed to residential uses, this could have positive effects upon water quality as there may be less run-off of nitrates. These effects are uncertain though.

Overall, the effects are predicted to be **neutral** on balance.

Option A4 involves a lower amount of growth than all other options, and therefore **neutral effects** are predicted as well.

### Scenario B (Discussion of options for delivering 15,700 homes)

The level of growth for options B2, B3 and B6 is the same as for A1, A2, A3, A5 and A6. Therefore, the effects are predicted to be the same (**neutral**). Though the growth for option B2 is slightly greater, the effects are still predicted to be **neutral**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA as there would be a very low level of growth involved for option C1. This ought to reduce the potential for polluting activities and demand for water resources.

## **Other settlements:**

### Scenario A (Discussion of options for delivering 8,100 homes)

Only options A3 and A4 involve growth in 'other settlements' and 'smaller villages and hamlets'. Therefore, there are **neutral effects** for each of the other options (A1, A2, A5, A6). Assuming a relatively even split amongst the settlements, it is likely that growth could be accommodated in most locations without having significant effects on existing resources and water quality. Furthermore, there would also be a need to consider SuDs in new developments. Therefore options A3 and A4 are also predicted to have **neutral effects**.

Where actively used agricultural land is changed to residential uses, this could have positive effects upon water quality as there may be less run-off of nitrates. These effects are uncertain though.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth in the other settlements and so **neutral effects** are predicted. Option B3 involves similar levels of growth compared to options A3 and A4, and so neutral effects are predicted. Option B4 however, would double the amount of growth in smaller settlements, this could put some of the smaller waste water treatment facilities under more pressure and increase surface water run-off, having an uncertain **minor negative effect** in the short term (as waste water may be more difficult to manage in rural areas)

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for 'other settlements' as there would be a very low level of growth involved for option C1. This ought to reduce the potential for polluting activities and demand for water resources.

## **Small Villages and Hamlets**

### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth is very small under option A4, and if spread across the small villages and hamlets should not have any effects on water quality in any particular location. Neutral effects are therefore predicted for A4 as well.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth for B4 is still small in the context of the overall amount of development across the borough, and so effects are unlikely to be significant.

## Water environment: Water quality

Neutral effects are still predicted at this level of growth at the Hamlets, though it may be more difficult to manage waste water in rural areas due to a lack of centralised infrastructure. Therefore, there are uncertainties involved.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only options A5 and A6 involve new settlements. The effects are therefore **neutral** for options A1, A2, A3 and A4. The effects for options A5 and A6 are the same, as each would involve the same level of growth at new settlements (i.e. 3000 dwellings). It is likely water quality would be unaffected as there will need to be new drainage and water treatment installed as part of any development.

Where actively used agricultural land is changed to residential uses, this could have positive effects upon water quality as there may be less run-off of nitrates. These effects are uncertain though.

#### Scenario B (Discussion of options for delivering 15,700 homes)

The effects are the same for scenario B, which involve the same level of growth at new settlements as for scenario A. Therefore, the effects are **neutral** for all options.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Effects are highly dependent upon location, which makes it hard to provide an overall conclusion.

With regards to broad areas to the east of the borough, there are a number of minor watercourses that could possibly be affected by development in the short term. However, it is likely that mitigation would manage such effects. Much of the land in this location is in use for agriculture and falls within a nitrate vulnerable zone for surface water. The change of land use from agricultural to residential, open space and other uses may therefore help to address water quality issues in the longer term.

To the north east of the PUA, the picture is similar to that described above, and therefore similar effects would be expected.

To the west of Shepshed the land is similarly agricultural. Given the proximity to Black Brook, there may be potential for effects on water quality during construction, but conversely, a change of use could help to reduce surface water run-off of nitrates.

Overall, it is concluded that significant effects on water quality would be unlikely at any of the locations, with potential improvements in the longer term. However, there could be short term negative effects. An **uncertain effect** is predicted at this stage due to the lack of detail about location and layouts (which would be important in determining more accurate effects).

### **Overall effects**

Option A1 is predicted to have a **minor negative effect** on water quality, which is associated with higher levels of growth in Loughborough and Shepshed. Whilst growth around Loughborough and Shepshed is predominantly in existing or adjoining built up areas, there is development likely to occur around Black Brook, which could see some short term impacts, particularly during the construction phase. The currently open and rural nature would be replaced by built-up development which can increase run off likelihood into the watercourse also.

Options A2, A3 and A4 are predicted to experience **minor negative effects** due to the development within the Soar Valley corridor, which is characterised by water courses with reliant biodiversity. The associated disruption and pollution with construction could cause some short term problems. This would need to be mitigated by comprehensive drainage systems.

Options A5 and A6 are predicted to have **neutral effects** on water quality as the spread and density of developments should ensure that pressures on water quality in any one location are reduced. The new settlements will need to include comprehensive drainage and waste water treatment works in support of development. The scale of growth should provide the economies of scale to secure effective mitigation / enhancement.

## Water environment: Water quality

Options B2, B3, B4 and B6 all involve double the amount of growth across the borough compared to those options in scenario A. The majority of the additional growth would be focused towards Loughborough/Shepshed and the Service Centres.

Whilst this overall increase in growth could put greater pressure on water resources by increasing the demands upon waste water treatment and drainage infrastructure, it is unlikely that development would be approved without subsequent planned upgrades. Implementing sustainable drainage systems should also help to ensure that increased hardstanding does not lead to more surface water pollution, whilst a change in use from agricultural land to residential land could also contribute to a reduction in pollution. Therefore, on balance, the effects for each of these options are only considered to be **minor negative**.

Option C could also put greater overall pressure on water resources, depending upon the level of growth delivered. This would be lower than scenario B though, and ought to be possible to manage with upgrades to infrastructure. As development would be likely to involve large amounts of agricultural land, the change in land use could contribute to a reduction in pollution in the longer term. An **uncertain effect** is predicted at this stage though.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	-	0	0	0	0	-
A2. Urban focus	-	0	0	0	0	0	-
A3.Settlement Hierarchy	-	0	0	0	0	0	-
A4. Proportionate growth	-	-	0	0	0	0	-
A5. Urban intensification and new settlement	0	0	0	0	0	0	0
A6. Urban focus and new settlement	0	0	0	0	0	0	0
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	-	-	0	0	0	0	-
B3. Settlement Hierarchy	-	-	0	0	0	0	-
B4. Proportionate growth	-	-	0	-	?	0	-
B6. Urban focus and new settlement	-	-	0	0	0	0	-
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0	0	?	?

## Water environment: Flooding

### Service centres

#### Scenario A (Discussion of options for delivering 8,100 homes)

Though some sites are adjacent to flood zones 2/3 there are no significant flood risks at any of the potential sites for development in Anstey. There is also limited potential for effects in Mountsorrel, Rothley, Sileby and Barrow upon Soar for the same reasons.

Sites in Quorn however, fall within flood zones 3/2 and therefore potential for negative effects exists at all levels of growth.

For each of the options a **neutral effect** is predicted. Though there could be potential effects at Quorn, these could be avoided by developing elsewhere, or more appropriate uses. The overall level of growth in each settlement should not lead to an increased flood risk elsewhere, provided that suitable drainage improvements are secured. This might be more difficult to achieve at higher levels of growth such as for options A2 and A4.

#### Scenario B (Discussion of options for delivering 15,700 homes)

At a higher scale of growth the likelihood of sites being within areas at risk of fluvial flooding does not increase substantially, as none of the available sites present particular issues. However, the increase in growth overall could be more difficult to manage in terms of surface water drainage. Therefore, **uncertain (minor) negative effects** are predicted for each option.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres as there would be a very low level of growth involved for option C1. It would therefore be unlikely that development occurs in areas of flood risk, and the contribution to flood risk elsewhere would be minimal.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Sites in Shepshed are largely within flood zone 1. The exceptions are sites to the west of the settlement, where the perimeter of sites are intercepted by flood zone 2 and 3 associated with Black Brook. Within the Loughborough Urban Area, the majority of potential development sites fall within flood zone 1, with only several sites having small parts of the site falling within flood zones 2 and 3. The sites on the urban periphery (to the south) contain greater areas of flood zones 2 and 3. However, the site options are large, and it should therefore be possible to avoid areas of flood risk and introduce sustainable drainage systems.

For each of the options, the risk of flooding on development sites should be low, as the sites are largely not at risk of flooding. At higher amounts of growth (option A1 for example) were there would be a need to release more land, then there could be development on sites that involve a greater element of flood risk. This is a potential negative effect, but ought to be possible to mitigate given the nature of the sites.

In terms of the overall level of growth, and potential changes to hydrology, a large increase in development in and around Loughborough and Shepshed are most likely to contribute to increased flood risk in the longer term. Therefore, option A1 is likely to have the greatest potential for negative effects in this respect also.

Overall, option A1 is predicted to have **minor negative effects**, whilst options A2, A3, A4, A5 and A6 are predicted to have **neutral effects**.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3, B4 and B6 would all involve considerably more development in Loughborough/Shepshed compared to any option under scenario A. This would most definitely involve the development of sites that contain areas at risk of flooding. However, the nature of flood risk on available development sites ought to allow for significant effects to be avoided provided that sustainable drainage systems are implemented. A **minor negative effect** is predicted for options B3, B4 and B6. For option B2, which involves maximised growth, there would be much less flexibility in the choice of sites and layout / densities, therefore a **significant negative effect** could occur.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

## Water environment: Flooding

**Neutral effects** are predicted for Loughborough / Shepshed as there would be a very low level of growth involved for option C1. It would therefore be unlikely that development occurs in areas of flood risk, and the contribution to flood risk elsewhere would be minimal.

### PUA:

#### Scenario A (Discussion of options for delivering 8,100 homes)

The majority of sites potentially available for development in the PUA do not fall within Flood Zones 2 or 3. However, there are some sites within Thurmaston that fall entirely within Flood Zone 3. Sites in Syston have mixed risks of flooding. At a lower level of growth it ought to be possible to avoid areas of flood risk. At higher levels of growth the need to develop in areas at greater risk (or closer proximity) to areas of flood risk would be necessary.

To deliver 3350 homes (as per options A1, A2, A3, A5 and A6) would require development on the available sites in the PUA and upon sites in Syston. Therefore, there would be potential for development that is affected by flood risk, which is a **minor negative effect**. At a lower level of growth (option A4), these potential effects could be more easily avoided and thus a **neutral effect** is predicted.

The overall level of growth involved could also affect surface water run-off and drainage patterns. However, several sites would be brownfield, and it ought to be possible to incorporate SUDs to greenfield site options given their size.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3, and B6 all involve the same level of growth as options A1, A2, A3, A5 and A6. Therefore, an **minor negative effects** are also predicted. Though option B4 involves double the level of growth compared to option A4, the effects are still predicted to be **neutral**, as there would still be a degree of flexibility in the choice of sites (to allow for areas of flood risk to be avoided).

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA as there would be a very low level of growth involved for option C1. It would therefore be unlikely that development occurs in areas of flood risk, and the contribution to flood risk elsewhere would be minimal.

### Other settlements:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Sites within the 'other settlements' have mixed risk of flooding. At some settlements, potential development sites do not fall within flood risk zones at all (Rearsby, East Goscore, Cossington, Thrussington, Wymeswold), whilst in others, small parts of the sites fall within flood zones 2 and 3, but this is mostly at the edge (Thurcaston, Burton on the Wolds, Barkby).

Growth for options A3 and A4 is at a level where it ought to be possible to avoid flood risk and/or implement suitable mitigation in the form of SUDs. Therefore, **neutral effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

There is no growth for options B2 and B6, so **neutral effects** are predicted. Option B3 has similar growth to options A3 and A4, and so a **neutral effect** is still predicted. For option B3, the amount of growth in the other settlements increases slightly compared to option A3, whilst the amount in the smaller settlements also increases. Despite these increases, it should still be possible to avoid flood risk, so **neutral effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the other settlements as there would be a very low level of growth involved for option C1. It would therefore be unlikely that development occurs in areas of flood risk, and the contribution to flood risk elsewhere would be minimal.

### Small Villages and Hamlets

## Water environment: Flooding

### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth is very small under option A4, and if spread across the small villages and hamlets should not have any effects in terms of flood risk locally given the flexibility in the sites available. However, it is noted that several settlements do fall within close proximity to flood risk zone 2/3 including Swithland, Barkby, Beeby and Wanlip. However, the majority of sites available in the SHLAA do not fall outside flood zone 1.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth for B4 is still small in the context of the overall amount of development across the borough, and so effects are unlikely to be significant. **Neutral effects** are still predicted locally at this level of growth at the Small Villages and Hamlets. Although there may be a greater number of sites developed, this would not contribute to increased flood risk locally as there are sufficient sites available that do not fall into areas of flood risk. Having said this, speculative sites that come forward in certain settlements may well fall into areas of flood risk. It is expected that these would not be supported though given the need to apply the sequential test.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Flood risk at the new settlement in Barkby is unlikely to present a constraint to development, as there are no areas at risk of flooding on site. It ought to be possible to manage surface water run-off through the application of SUDs. Likewise, the site at Wymeswold is not at risk of fluvial flooding and is unlikely to present a constraint to development, nor increase flood risk downstream.

The site at Cotes contains small areas that fall within Flood Risk Zones 2 and 3; a small stream running through the site, as well as a small part of the River Soar flood plain. Despite this, the development of the site could be accommodated without increasing flood risk. Not least, the large nature of the site ought to allow for green infrastructure and sustainable drainage systems to be incorporated. Therefore, a neutral effect is predicted.

At the potential new settlement site in Thurcaston, there is a band of flood zone 2/3 running through the site from south-east to north-west. There is also a band of flood risk zone 2/3 to the north west of the site associated with the Rothley Brook. Development here is more greatly constrained by potential flood risk, but again it ought to be possible to incorporate green infrastructure and drainage solutions into a large development. An uncertain negative effect is predicted at this location.

Overall, the effects of development for options A5 and A6 are predicted to be **neutral** in terms of the new settlements. This reflects the neutral effects at three of the new settlements, and only uncertain negative effects at Thurcaston. There may also be the potential for enhancement to flood risk management at each of the new settlement developments.

#### Scenario B (Discussion of options for delivering 15,700 homes)

The effects for options B2, B3, B4 and B6 are **neutral**, as they involve no growth or the same level of growth as options A5 / A6.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

None of the broad locations for a potential new large scale settlement fall within areas that are at a high risk of flooding. Whilst small parts of a development site might be intersected by areas at risk of flooding, it should be relatively easy to avoid areas of flooding. The large scale growth in development in one location could possibly lead to increases in surface water run-off / changes to hydrology downstream. However, the scale of growth involved should allow for mitigation measures in the form of SUDs (utilising natural systems). Consequently, the effects are likely to be neutral overall regardless of location.

#### Overall effects

## Water environment: Flooding

Option A1 is predicted to have a minor negative effect overall. This is mainly attributable to several sites potentially being developed in Loughborough/Shepshed and the PUA that contain areas at risk of flooding. The large focus of growth in these locations could also be more likely to contribute to changes in hydrology.

Options A2-A6 are all predicted to have **neutral effects**. The spread of growth across the borough should allow for areas at risk of flooding to be avoided in the main. The more dispersed nature of growth should also lead to less pressure on drainage infrastructure in any one location. Though there are minor negative effects at the PUA, the overall picture is neutral.

Options B3, B4 and B6 are all predicted to have **minor negative effects** with regards to flooding. There would be substantially more growth at Loughborough/Shepshed, which would mean sites at partial risk of flooding would need to be developed. The overall increase in growth in this area could also affect surface water run-off. Likewise, an increase in growth at the service centres could also affect drainage, and/or lead to a need for more dense development. These are only uncertain negative effects, but in combination with the potential effects at the PUA and the minor negative effects at Loughborough, each option is likely to be negative overall. Due to the significant level of growth at Loughborough for option B2, and the lack of site flexibility, a **significant negative effect** has been identified for option B2.

Option C1 is predicted to have **neutral effects** across the borough. The effects at existing settlements would be limited given the low scale of growth involved. Though there would be substantial growth at a large new settlement, this isn't likely to be in areas of high flood risk and mitigation and enhancement ought to be possible to ensure that impacts on flood risk downstream is not increased.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	-	-	0	0	0	-
A2. Urban focus	0	0	-	0	0	0	0
A3. Settlement Hierarchy	0	0	-	0	0	0	0
A4. Proportionate growth	0	0	0	0	0	0	0
A5. Urban intensification and new settlement	0	0	-	0	0	0	0
A6. Urban focus and new settlement	0	0	-	0	0	0	0
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	-?	--	-	0	0	0	--
B3. Settlement Hierarchy	-?	-	-	0	0	0	-
B4. Proportionate growth	-?	-	0	0	0	0	-
B6. Urban focus and new settlement	-?	-	-	0	0	0	-
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0	0	0	0

## Land: Soil resources

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

For the service centres, site options are mostly on the urban fringe and would therefore involve the loss of agricultural land.

Options A1 and A5 involve no development in Service Centres. Option A6 involves the lowest amount of growth.

In Sileby, presuming a need to provide approximately 125 dwellings (one 6<sup>th</sup> of the total of 750), there could be a loss of up to 4ha of land, but it would most likely be grade 2 land. At Anstey, presuming a similar level of growth, the loss of land would similarly be up to 4ha, but grade 2 land could be avoided – i.e. it would be grade 3. At Rothley, a similar amount again would be lost (4ha of grade 3 land). For Barrow upon Soar, a similar loss would be expected (4ha of grade 2 land). There would be limited loss of agricultural land at Mountsorrel. At Quorn, a loss of up to 4ha of grade 3 land is predicted.

Overall, the total loss of agricultural land under option A6 could be up to 20ha, with at least 12ha likely to be grade 2. Whilst any loss of agricultural land is considered to be negative from a soil resources perspective, the effects are predicted to be **neutral** as the magnitude of effects is small, in the context of resources at a borough scale.

For option A3, the level of growth in the service centres is double that under option A6. Given the need for additional land for development, the loss of agricultural land would be likely to be approximately 36ha in total. Again, this would be a mix of grade 2 and 3. The majority of land at Sileby is grade 2, and so a further 4 ha of grade 2 could be lost here. At Barrow, a similar loss would be expected, but it could be a mix of grade 2 and 3. A further 4ha of grade 3 land could be lost at Anstey, and similarly at Rothley. For Quorn, the additional site options do not involve agricultural land and thus, no further loss would be anticipated.

Option A2 involves a greater amount of growth in the service centres compared to option A3. Wherever this is delivered it is likely to lead to further loss of agricultural land. This could equate to approximately 18 ha of additional land lost, equating to 54ha in total. Given the quantum and quality of land likely to be lost, a **minor negative effect** is predicted.

Option A4, would deliver 2458 dwellings across the service centres, which is more than three times the amount for option A6. Wherever this additional growth is delivered, it is likely to lead to further loss of agricultural land. This could equate to approximately 60 ha in total. Given the quantum and quality (large amounts of grade 2) of land likely to be lost, a **significant negative effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B6 would involve approximately the same level of growth as option A4, and therefore 60ha of land could be lost. This is a **significant negative effect**.

Option B2 involves 4080 homes, which could lead to a loss of 110ha in total, which is also a significant negative effect.

Option B3 involves a further 270 homes which could equate to an additional 8ha (118ha total) and option B4 involves a further 220 homes still which could lead to a total loss of 125ha. All four options are predicted to have **significant negative effects** due to the scale of loss, and the greater likelihood that grade 2 land would be lost too.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres. At the scale of growth involved, it ought to be possible to avoid best and most versatile agricultural land entirely. At worst, there could be a loss of 5ha land across the Service Centres, which is minimal in the context of the Borough resources.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

There are a number of options in the urban area of Loughborough and Shepshed that could accommodate a proportion of new growth under each of the options. There is also non-agricultural land outside the urban area in Shepshed that could accommodate growth. This would help to avoid the loss of agricultural land and it is assumed brownfield sites would be maximised as part of the spatial strategy. However, to meet the required housing targets under each option, there would be a need to release greenfield land on the fringes of Loughborough and Shepshed.

## Land: Soil resources

For option A6, which involves the lowest level of growth in these areas, there ought to be greater flexibility in the choice of sites. There may be enough sites in the urban area and on non-agricultural land to deliver this option. Even if a small number of greenfield sites were selected, the total loss would be unlikely to be greater than 12ha. The effects are therefore predicted to be **neutral**, as the magnitude of loss is very small, and a large proportion of this could be Grade 3 (which may or may not be best or most versatile agricultural land).

Option A3 (2100 dwellings) involves more than double the amount of growth compared to option A6. There would therefore be a need to release further greenfield land. There would still be some flexibility in site choice though, and so grade 3 land could be targeted rather than grade 2. However, it might be expected that a further 35 ha of land would be lost. A total loss of 47 ha is considered to be a **minor negative effect**.

Option A5 involves slightly lower growth than option A3 (350 dwellings less) and therefore, would be likely to involve approximately 10ha less compared to option A3 (i.e. a total loss of approximately 37ha). This is a **minor negative effect**.

Option A1 involves the greatest amount of growth at 4750 dwellings. This would necessitate the need for further land take, of which a greater amount would be likely to be grade 2 agricultural land. In total approximately 110ha could be lost, which is predicted to be a **significant negative effect** given the higher overall loss and proportion of higher quality land.

For option A2, the loss of land would be approximately 70ha, which is considered to be a **minor negative effect**. Whilst the quantum of land affected is fairly high, it ought to be possible to mostly avoid grade 2 land.

For option A4, the loss of land would be approximately 95ha, of which a greater proportion would need to include Grade 2 land. This is considered a **significant negative effect** given the higher overall loss and proportion of higher quality land.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3, B4, B6 would all involve substantially more growth compared to options under scenario A. There would be a loss of approximately 200ha for each option, which is a **significant negative effect**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for Loughborough / Shepshed. At the scale of growth involved, it ought to be possible to avoid best and most versatile agricultural land entirely. At worst, there could be a loss of 7ha land, but this is unlikely, and is minimal in the context of the Borough resources.

## **PUA:**

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 all involve approximately 3350 dwellings. Presuming this consisted of a mix of urban sites (i.e. within Thurmaston) and sites on the urban fringe (at Thurmaston, Birstall and adjacent to the A630 for example) and at Syston (a mix of urban and mostly greenfield sites) there would be a potential loss of agricultural land classified mostly Grade 3 land. Site opportunities adjacent to Thurmaston consist of approximately 27ha of grade 3 agricultural land. This could be lost to development. Similarly, 20 ha of land adjacent to the A630 is classified as grade 3 (though this doesn't appear to be in agricultural use and may not be best and most versatile (i.e. 3a). Approximately 55 ha of land could also be lost in Syston of either grade 2 or 3 land. Overall, approximately 85ha could be lost, with the majority being Grade 3 land. This could be higher though should the brownfield sites in the urban area not be found to be deliverable. This is considered to be a **minor negative effect**.

Option A4 delivers much fewer dwellings, and would therefore be much less likely to lead to the loss of agricultural land. Given that some of the land could be met in the urban area of Birstall and Thurmaston on non-agricultural land, the total loss of grade 3 land would likely be less than 15 ha. Therefore, a **neutral effect** is predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve the same growth as options A1, A2, A3, A5, and A6, and therefore the effects are the same (85ha - **Minor negative**). Option B4 would involve lower growth, and the likelihood and amount of loss is therefore lower (approximately 45ha). This is considered to be a **neutral effect**.

## Land: Soil resources

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA. At the scale of growth involved, it ought to be possible to avoid best and most versatile agricultural land entirely. At worst, there could be a loss of 10ha land, but this is unlikely and is minimal in the context of the Borough resources.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

The majority of 'other settlements' fall within the countryside / rural parts of the Borough. Therefore, the majority of land available for development is classified as either grade 2 or grade 3. The exceptions are in Queniborough and East Goscote, which present several sites that are not agricultural in nature. Assuming a fairly even split across the settlements (*though some villages do not have the same opportunities for development as others*), there would be some loss of agricultural land in most of the settlements. In some settlements, the loss would be of grade 3 land (Wymeswold, Thrusington, Burton on the Wolds, Hathern), whilst at others it would likely be grade 2 (Rearsby). In total, approximately 27ha could be affected for option A3 and 17ha for option A4, but the majority would be grade 3 (which may or may not be best and most versatile land). Given the low magnitude of land likely to be lost, and most of this being grade 3 land, **neutral effects** are predicted for options A3 and A4 (the only options to involve growth in the 'other settlements'). All other options are also predicted to have **neutral effects** given that there is no growth involved.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B3 would involve similar growth to option A3 and therefore the effects are **neutral**. Option B4 would deliver twice the amount of growth compared to option A4 (both being proportionate approaches), and therefore a loss of up to 45ha could occur. This is a **neutral effect** given the low magnitude of effects in the context of the borough.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres. At the scale of growth involved, it ought to be possible to avoid best and most versatile agricultural land entirely. At worst, there could be a loss of 3ha land across the Service Centres, which is minimal in the context of the Borough resources.

### **Small Villages and Hamlets**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The villages and hamlets vary in character, with some being located in Charnwood Forest, and others in more open countryside on agricultural land. The grade varies from 2 to 3 dependent upon location. Overall, the loss of agricultural land for A4 would be likely to be less than 7 ha, and perhaps lower given the flexibility in site choices across the borough. This is not considered to be significant in the context of borough-wide and regional resources. Consequently, a **neutral effect** is also predicted for A4.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. Overall, the loss of agricultural land for A4 would be likely to be less than 14 ha, with at least half of this being grade 3 land that may not actually be classified as best and most versatile. Therefore, this minor loss is not considered to be significant in the context of borough-wide and regional resources, nor at a local level with regards to the rural economy in these areas. Consequently, a **neutral effect** is also predicted for B4.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

## Land: Soil resources

The new settlement opportunity at Cotes is classified as predominately grade 2 land (132ha), which appears from field patterns to be in agricultural use. The new settlement opportunity Barkby is categorised as grade 3 land (47ha), which appears to be in agricultural use. The new settlement opportunity Wymeswold is partially an airfield plus areas of grade 2 and 3. However, much of the land does not appear to be in agricultural use, rather it is semi-natural greenspace. A loss of land here is unlikely to affect any best or most versatile land. The new settlement opportunity Thurcaston is composed of approximately 20ha of grade 2 land and 16ha of grade 3 land, which appear to be in agricultural use.

In total, the development of these sites as new settlements would be likely to result in over 200ha of agricultural land loss. This is predicted to be a **significant negative effect** for both options A5 and A6.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not involve growth at the new settlements, and so **neutral effects** are predicted. Option B6 involves the same growth at new settlements as for options A5 and A6, and so a **significant negative effect** is also predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

The loss of agricultural land would be largely dependent upon the location of a new settlement. To the east of the borough in the open countryside, it is likely that a new settlement would involve a substantial amount of agricultural land loss. This could be grade 2 or 3 land up to approximately 360ha. This would be a significant negative effect. West of Shepshed, there would also be a similar loss of agricultural land, but this would be predominantly grade 3. To the north east of the PUA the effects would be similar, with potential loss of grade 2 and / or 3 land. Therefore, significant negative effects could occur in two of these locations.

### Overall effects

Each of the options is predicted to have significant effects upon soil resources. The different options involve loss in different locations, but the overall picture is that agricultural land is likely to be lost regardless. Though each option would involve a significant loss of resource. Options A5 and A6 are considered to perform the poorest under scenario A, as they would lead to substantially more loss compared to the other options. For scenario B, all of the options would involve greater loss compared to Scenario A, with Option B6 performing the worst. Option C1 would also have significant negative effects, focused almost entirely at a new settlement.

The total amount of land lost under the options is estimated as follows; Option A1 = 195ha, Option A2 = 218 ha; Option A3 = 195ha, Option A4 = 194ha, Option A5 = 322ha, Option A6 = 317ha, Option B2 = 395ha, Option B3 = 448ha , Option B4 = 415ha, Option B6 = 545ha, Option C1 = 360ha?

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	--	-	0	0	0	--
A2. Urban focus	--	-	-	0	0	0	--
A3.Settlement Hierarchy	-	-	-	0	0	0	--
A4. Proportionate growth	--	--	0	0	0	0	--
A5. Urban intensification and new settlement	0	-	-	0	0	--	--
A6. Urban focus and new settlement	0	0	-	0	0	--	--
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	--	--	-	0	0	0	--
B3. Settlement Hierarchy	--	--	-	0	0	0	--
B4. Proportionate growth	--	--	0	0	0	0	--
B6. Urban focus and new settlement	--	--	-	0	0	--	--
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0	0	--	--

## Air quality

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Existing services and road networks would be used to support development in the service centres, with the level of growth involved not likely to require strategic infrastructure upgrades. Though increased growth could contribute to transport along routes into Leicester and Loughborough, the effects on air quality locally are not likely to be significant at this level of growth due to the spread of development and the absence of air quality management areas (AQMA) or areas of concern at the Service Centres.

Consequently, each of the options is predicted to have **neutral effects** with regards to air quality in the service centres.

#### Scenario B (Discussion of options for delivering 15,700 homes)

At a higher scale of growth, air quality is still not anticipated to be significantly affected in the service centres themselves, but could lead to a worsening of quality in town centres due to increased traffic, congestion and car usage. Furthermore, the overall increase in housing would lead to increased car trips, which could contribute to air quality issues in more sensitive areas such as Loughborough and Leicester City. For options B2, B3 and B4 a potential **minor negative effect** is predicted, with a **neutral effect** for option B6 which involves lower growth.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres. At the scale of growth involved, the number of additional trips generated would be minor and unlikely to contribute to air quality issues.

### Loughborough / Shepshed:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Data for Loughborough from 2015 indicates that there has been a significant reduction in the concentration of NO<sub>2</sub> levels around the town centre since the opening of the Inner Relief Road in November 2014<sup>9</sup>. The AQMA however still remains within Loughborough (Nitrogen Dioxide (NO<sub>2</sub>)) and there is potential for this area to be worsened by concentrated development resulting in more congestion and car journeys. The AQMA around the railway station is particularly sensitive to being affected.

For options A3, A5 and A6, which involve lower levels of growth, development could be contained mostly within the urban areas, and therefore, the need to travel would be somewhat reduced. The overall level of growth would be less likely to have significant negative effects upon air quality, and so **neutral effects** are predicted. Options A2 and A4 would involve a higher amount of growth and so there may be potential for **negative effects** on air quality, but there is uncertainty. Option A1 is most likely to have effects on air quality due to the higher concentration of growth in and around Loughborough and Shepshed. However, the effects are not predicted to be significant given the spread of development and choice of sites. It may also be possible to secure infrastructure improvements for larger developments. A **minor negative effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

At a higher scale of growth, there would be a need to release the majority if not all available sites, which could lead to increased trips to, from and through Loughborough and Shepshed. This could lead to worsening air quality, possibly in AQMA. Consequently, a **significant negative effect** is predicted for options B2, B3, B4, B6-10 (with option B2 performing worst). The potential to secure strategic road improvements might help to reduce air quality pressures, but this has not been factored into the assessment given that there are no specific schemes planned.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for Loughborough / Shepshed. At the scale of growth involved, the number of additional trips generated would be minor and unlikely to contribute to air quality issues.

<sup>9</sup> LAQM Annual Status Report 2016 – Charnwood Borough Council

## Land: Soil resources

### PUA:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Travel into and out of Leicester often suffers peak time congestion along the main arterial routes. This is highlighted by the AQMA in Syston (NO<sub>2</sub>), and within Leicester City itself. Increased development on the urban periphery is likely to increase traffic along these routes, which could impact upon air quality in these areas. Monitoring data suggests that annual mean objective of 40µg/m<sup>3</sup> is not close to being exceeded in Syston, or in locations around the PUA. Therefore, whilst the level of increased growth involved could lead to a worsening of air quality, the effects would not be expected to be significant.

A **minor negative effect** is predicted for options A1, A2, A3, A5 and A6. For option A5, a **neutral effect** is predicted as the amount of growth focused in these areas is much lower.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve the same growth as options A1, A2, A3, A5 and A6 and therefore **minor negative effects** are predicted. Option B4 involves a lower level of growth, and so the effects are less likely to occur. An **uncertain negative effect** is predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA. At the scale of growth involved, the number of additional trips generated would be minor and unlikely to contribute to air quality issues.

### Other settlements:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Given the more rural nature of some of the 'other settlements' and hamlets, growth in these locations is likely to increase the number and length of car trips. However, the dispersed nature of growth and lack of existing air quality issues in the other settlements (and hamlets for option A4) means that significant effects upon air quality would not be anticipated in these areas. **Neutral effects** are predicted for all options, though it is possible that growth in these areas could contribute to traffic along major routes.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Despite a higher level of growth at the other settlements and hamlets under option B4, the effects are still predicted to be **neutral** for each of the options.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the other settlements. At the scale of growth involved, the number of additional trips generated would be minor and unlikely to contribute to air quality issues.

### Small Villages and Hamlets

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth under A4 would be low in the context of overall development across the borough. Though this is likely to encourage car trips, the effects on air quality would be **neutral** as new homes would not be placed in sensitive areas or generate significant emissions.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth under B4 would be low in the context of overall development across the borough. Though this is likely to encourage car trips, the effects on air quality would be **neutral** as new homes would not be placed in sensitive areas or generate significant emissions.

## Land: Soil resources

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only Options A5 and A6 propose development in new/expanded settlements. New development here would need to include accessible services, a well-designed infrastructure network and effective public transport to ensure that car journeys are minimised and that congestion into the main towns in the Borough and surrounding areas is minimised. However, it is anticipated there will be a **minor negative effect** on air quality given that the new settlements at Cotes / Wymeswold could lead to higher levels of traffic on routes towards Loughborough and settlements at Thurstaston and Barkby could contribute to air quality issues in the PUA.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B6 involves the same level of growth as options A5 and A6, and therefore **minor negative effects** are predicted also.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

The effects of option C1 would be largely dependent upon the location of a large new settlement.

Common to all three broad opportunity areas is the very large scale of growth in one location which could put pressure on local road networks and subsequently increase the emissions of air pollutants. A large settlement to the west of Shepshed could potentially increase the amount of traffic travelling through Loughborough compared to more modest growth in this area. Consequently, there could be potential to affect the AQMA in this area and also activity at Junction 23 of the M1. Though a development of such size would be expected to make substantial contributions to highways network improvements, a significant negative effect could still potentially occur in this location. Likewise, growth to the north east of the PUA could lead to substantially more car trips to and from Leicester and possibly through Syston AQMA. This could also potentially have significant negative effects. A development to the east of Loughborough in the open countryside would be further away from urban areas with higher concentrations of pollutants. Additional car trips may therefore be less likely to contribute to air quality issues in one particular area that is already sensitive to additional emissions. As the location of a new settlement and supporting infrastructure is not known at this time, a precautionary approach is taken and a potential **significant negative effect** is recorded for option C1.

### **Overall effects**

Option A1 focuses growth purely at Loughborough and Shepshed and the PUA. Growth in these areas could both potentially affect air quality in AQMAs, though the effects would not be anticipated to be significant in either location. Overall, the effects are predicted to be **minor negative**.

Option A2 shows a similar pattern of development as option 1, with a concentration around the PUA, Loughborough and Shepshed, but more growth is diverted from Loughborough to the Service Centres. This is likely to lead to less pressure on the AQMAs at Loughborough, and so effects here are likely to be lower. The effects in the Service Centres are not expected to be significant either, but growth here could still generate trips to and from areas of greater sensitivity. A **minor negative effect** is predicted overall.

Option A3 disperses growth further to the other settlements, lowering the amounts focused at Loughborough and the Service Centres. As a result, effects on air quality in any particular location are predicted to be lower. Though the overall increase in growth could still lead to increases in traffic, the effects are not expected to be significant. Minor negative effects could still be generated in the PUA though. Overall, an **uncertain negative effect** is predicted.

Option A4 takes a proportionate approach which should enable a more even spread of development throughout the Borough. This approach would lead to the lowest level of growth at the PUA, and so effects here could be better avoided. Neutral effects are predicted in the majority of areas, though there are potentially negative effects in Loughborough. Despite there being less of a focus in any one area, increased traffic and patterns of travel could still contribute to air quality issues in sensitive locations. An **uncertain (minor) negative effect** is predicted overall.

## Land: Soil resources

Options A5 and A6 propose similar amounts of development, focused largely at the PUA and new settlements. This pattern of growth could lead to minor negative effects in these locations. In combination with growth at the PUA, two of the new settlements nearby (Barkby and Thurcaston) could exacerbate the effects in the PUA. It is uncertain whether these effects would be significant without transport modelling. **Minor negative effects** are predicted at this stage.

Options B2, B3, B4, B6 all propose substantially higher levels of growth to Loughborough. This would lead to an increase in traffic, which could potentially affect air quality. Though the inner link road has reduced air quality problems in the centre somewhat, it is unclear whether the additional level of growth could be accommodated without a worsening of air quality. An increase in growth would also occur at the service centres for options B2, B3 and B6, which could generate minor negative effects in these locations, and also contribute to traffic heading towards more sensitive areas. Overall a **significant negative effect** is predicted for each option.

Option B6 would have fewer effects at the service centres, but greater effects as a result of new settlements. Overall, the effects are still significantly positive.

Overall, option C1 is predicted to have a potential **significant negative effect** with regards to air quality. Placing a substantial amount of growth in one location could potentially increase air pollutants. Should this be within close proximity to urban areas with designated AQMAs the additional traffic could potentially contribute to a worsening in air quality. The effects across the rest of the district would be minimal, with the exception of those settlements that are located within close proximity to a new settlement.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	-	-	0	0	0	-
A2: Urban focus	0	-?	-	0	0	0	-
A3: Settlement Hierarchy	0	0	-	0	0	0	-?
A4: Proportionate growth	0	-?	0	0	0	0	-?
A5: Urban intensification and new settlement	0	0	-	0	0	-	-
A6: Urban focus and new settlement	0	0	-	0	0	-	-
<b>Scenario B – 15,700 homes</b>							
B2: Urban focus	-	--	-	0	0	0	--
B3: Settlement Hierarchy	-	--	-	0	0	0	--
B4: Proportionate growth	-	--	-?	0	0	0	--
B6: Urban focus and new settlement	0	--	-	0	0	-	--
<b>Scenario C - Standalone new settlement</b>							
C1: Large scale new settlement	0	0	0	0	0	--?	--?

## Climate change

### Overall effects

The ability to deliver resource efficient and resilient developments ought not to be dependent upon location. Therefore, the distribution of homes to different levels of the settlement hierarchy should have the same effects on emissions from the built environment regardless of location. Development in any location should also provide opportunities to introduce resilience measures such as green infrastructure, green roofs, SUDs. The effect of scenario A on emissions is predicted to be neutral with regards to the built environment; as such growth might be expected to occur anyway in the absence of the plan (albeit in a less strategic manner). For scenario B, the level of growth is higher, and thus the overall emissions on the Borough may be expected to increase (though this could correspond in a decrease elsewhere).

Location can also lead to differences in the amount of emissions from transport, and certain locations or types of sites (larger mixed use) may also be more likely to support decentralised energy schemes. These factors are discussed below with regards to each option. The effects have not been broken down by different levels of the settlement hierarchy, as impacts in one area could offset those in another. Therefore, it is more appropriate to discuss the overall implications of each option with regards to emissions and resilience.

*Option A1* focuses the majority of growth in Loughborough / Shepshed and the principal urban area. Both these locations have good access to jobs, services and public transport. Therefore, new development should be less likely to generate long car trips (and associated emissions). This option would also not lead to further growth in less accessible locations. Whilst there is no solid evidence to support decentralised energy schemes, the scale of some site options in Loughborough, and the higher heat demand in the urban area could make these locations more suitable for such schemes.

Larger site options may also be more appropriate for delivering strategic green infrastructure improvements, which can help with climate change resilience for wildlife and for human health. This could be particularly beneficial for more built up areas such as Loughborough, Shepshed and Syston, in terms of helping to reduce a potential heat island effect.

On balance, a **major positive effect** is predicted in terms of climate change emissions.

*Option A2* still focuses a large proportion of growth to the PUA, but slightly less to Loughborough and Shepshed, whilst including growth at the service centres. Whilst access to services, facilities and jobs are more accessible in Loughborough compared to the service centres; these settlements still offer reasonable accessibility. Therefore, anticipated trips by car ought not to be significantly higher compared to Option A1.

With regards to resilience, growth at some of the service centres would be on smaller scale sites, and so strategic improvements may be more difficult to secure. The lower demand for heat and the smaller scale of sites could also make decentralised energy opportunities less feasible. On balance, a **minor positive effect** is predicted.

*Option B2* involves the same distribution of growth as Option A2, but delivers double the amount of housing.. The effects would therefore be exacerbated. The increased amount of growth at the service centres in particular could help to create a critical mass to support new facilities that improve accessibility and reduce the need to travel. However, the overall increase in growth could lead to greater emissions overall. Therefore, the positive effects are somewhat dampened. A **minor positive effect** is predicted.

*Option A3* disperses growth further, with slightly less growth at Loughborough and the service centres, but more at 'other settlements' at a lower level of the settlement hierarchy. Given that some of these settlements have poorer access to services, facilities and public transport, this option is more likely to lead to an increase in car trips and associated emissions. The opportunities for strategic resilience measures or low carbon energy schemes are also likely to be more limited for the smaller-scale site options at these settlements. On balance a **neutral effect** is predicted. In the absence of a Plan, one might expect some growth at different levels of the settlement hierarchy anyway. This option would not lead to substantial differences in travel pattern and emissions compared to the baseline situation.

Option B3 proposes a similar distribution to option A3, but with increased growth in Loughborough/Shepshed and the Service centres. The effects are therefore likely to be a **minor positive** to reflect the location of a critical mass of people in accessible locations. As for option B2 though, the higher level of growth dampens the positive effects somewhat.

*Option A4* would see the bulk of growth in Loughborough. Unlike the other 5 options, there would be much lower growth in the PUA, but a more dispersed pattern of growth across the borough. Growth in the PUA could help to reduce the length of trips made to access jobs (with many opportunities in the City Centre), and therefore redistribution of these to smaller settlements (other settlements / small villages and hamlets) across the district might lead to an increase in emissions from transport overall. Consequently, a **minor negative effect** is predicted.

## Climate change

Option B4 involves a higher amount of growth in the other settlements and smaller villages compared to any option. This will lead to a greater amount of homes in areas that are more reliant on the private car. This could lead to an increase in emissions. Whilst the increase in growth at the service centres and Loughborough/Shepshed could be positive in respect of supporting new services, and placing homes in accessible locations, the overall increase in growth offsets this somewhat. A **minor negative effect** is predicted.

Options A5 and A6 involve the same level of growth at the PUA as options A1, A2 and A3. Growth here ought to have relatively good access to facilities and jobs and help minimise increases in transport emissions. Both options also involve a modest amount of growth in Loughborough, whilst option A6 involves growth in the service centres too. The growth in these locations and the PUA is predicted to have a minor positive effect in terms of emissions. However, there would also be substantial growth at new / expanded settlements. The location of these settlements is not ideal with regards to accessibility. Therefore, without securing new services and facilities to serve new communities, there is likely to be an increase in car travel associated with growth in these locations. This offsets any positive effects that could be achieved through a focus on the PUA and Loughborough. On balance a minor negative effect is predicted for both options. There is uncertainty though, as new settlements of this scale ought to be more suitable for securing improved services and facilities.

Option B6 involves a new settlement, with the level of growth at these location the same as options A5 and A6. The effects associated with these (i.e. potentially negative) therefore remain. As per the other options under scenario B which involve increased growth in Loughborough and the Service centres, there are some positives with regards to locating people in accessible areas. However, the overall increase in growth offsets this somewhat. An **uncertain negative effect** is predicted.

The effects of option C1 will be dependent upon the location of a new settlement. Generally speaking, the settlements should have good access to local services, facilities and open green space because this would be an integral part of development at such a scale. This ought to help reduce emissions from this form of travel. However, access to jobs may be reliant upon private cars unless expanded bus facilities are established as part of development. This could therefore lead to an increase in carbon emissions. Overall, it is likely that the emissions generated would be minor taking these different factors into account. With regards to the potential for low carbon energy generation and sustainable design, it ought to be more feasible to establish viable schemes for larger scale developments. However, viability would also depend upon there being a suitably varied range of uses and anchor loads for heat. It is unclear whether new settlements would involve such features. Therefore effects are uncertain in this respect. With regards to resilience, large new settlements should provide good opportunities to incorporate multi-functional green infrastructure which can help manage flood risk and other effects of climate change. Overall, an **uncertain (minor) negative effect** is predicted.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	/	/	/	/	/	/	++
A2. Urban focus	/	/	/	/	/	/	+
A3.Settlement Hierarchy	/	/	/	/	/	/	0
A4. Proportionate growth	/	/	/	/	/	/	-
A5. Urban intensification and new settlement	/	/	/	/	/	/	-?
A6. Urban focus and new settlement	/	/	/	/	/	/	-?
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	/	/	/	/	/	/	+
B3. Settlement Hierarchy	/	/	/	/	/	/	+
B4. Proportionate growth	/	/	/	/	/	/	-
B6. Urban focus and new settlement	/	/	/	/	/	/	-?
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	/	/	/	/	/	/	-?

## Historic Environment

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 are predicted to have **neutral effects** in terms of the service centres, as there would be no focused growth. The effects for options A2, A3, A4 and A6 would vary, as growth at each of the service centres would be different, and could give more or less flexibility in the choice of sites, and / or ability for mitigation.

As a general point, growth throughout the Soar Valley is likely to have greater potential to affect areas of potential archaeological importance, as these locations are where human activity has been focused. In terms of effects on the historic built environment, this varies for each settlement.

At Barrow-upon-Soar, none of the site development options are in locations that would lead to significant effects upon the character of the settlement or any historic assets. However, several of the sites are not logical extensions to the urban area, so could affect the feel of the urban fringes.

At Quorn there is sufficient development capacity in non-sensitive locations alongside the A6. Therefore, neutral effects for each option would be anticipated.

There are a variety of site options in Sileby. Effects upon cultural and natural heritage would be dependent upon which sites were developed. There are sizeable development opportunities at the urban fringe that ought to be possible to deliver without having a negative effect upon the character of the settlement. However, as arable land, these areas could be of importance for archaeology. At lower levels of growth such as for option A6, effects ought to be neutral, whilst they could be negative at the highest levels of growth such as for option A4.

At Rothley, the potential for negative effects is higher, as development could cut into Rothley Park, which provides the setting for a range of historic assets. Other development opportunities, such as at Woodcock Farm, would have the potential to affect the setting of a listed building (Woodcock Farm Barn). For option A4, the level of growth required would be higher, and so a negative effect could occur, whilst for option A6, it ought to be possible to avoid negative effects. For options A2 and A3 a minor negative effect is more likely.

For Anstey, growth opportunities could potentially sit to the south of the Conservation Area, affecting the open nature of this area. Development here could potentially have minor negative effects, but could probably be avoided at lower growth options. Other site options on the urban fringe are unlikely to have adverse effects on the character of the settlement, as they would likely be an extension to existing suburban housing development which has already shaped the character of these areas.

Overall, the effects on the service centres is not predicted to be significant for any of the options. Option A4, which proposes the most growth in these settlements, has the potential for negative effects, but only in Rothley and Sileby. Therefore, only a **minor negative effect** is predicted overall.

Options A2 and A3 would involve lesser growth, and so the effects could potentially be better managed. Consequently, an **uncertain negative effect** is predicted to reflect greater flexibility.

Option A6 would allow for growth to be delivered at suitable locations and densities to allow for negative effects to be avoided. Therefore, **neutral effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B6 involves similar growth to option A4, and therefore a **minor negative effect** is also predicted. Options B2, B3 and B4 involve much more growth in the service centres. In some of the settlements, this would be unlikely to have a substantially different effect given the location of potential development sites. However, at others such as Rothley and Sileby, there could be potential for more pronounced negative effects.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres with regards to heritage. At the scale of growth involved, it is unlikely that the character of settlements would be adversely affected. It should be possible to avoid sensitive sites and implement suitable mitigation.

## Historic Environment

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

For each of the options, it is likely that there would be maximisation of brownfield sites in the urban areas. For Shepshed, the majority of sites do not contain nor are adjacent to designated heritage assets. Development here would not be expected to affect the setting of more distant heritage assets either as they are relatively well screened or have no major bearing on the character of the area.

For Loughborough, there are several sites that fall within or adjacent to the Conservation Area and/or contain listed buildings. At some sites, it ought to be relatively easy to avoid harm to the historic environment, and perhaps achieve enhancement (for example, 45-54 Pinfold Gate falls within a site option, but this frontage could be retained and the surrounding built environment improved). There are sites adjacent to Conservation Areas that do not add to their character, and redevelopment ought to improve the built environment (for example, site options at Lemyngton Street, Land at True Lovers Walk / Frederick Street, Station Avenue, Leicester Road/Aumberry Gap). At other sites though, there could be potential negative effects on heritage that are difficult to avoid (for example; Rosebury School site - which could involve the loss of a listed building, or Land off Leicester Road – which could change the open nature of Loughborough Chapels). Overall, the effects in the urban areas of Loughborough and Shepshed would be anticipated to be neutral. There may be some minor negative effects at certain sites in Loughborough, but positive effects / enhancements at others. The effects in Shepshed urban area would not be substantial.

For each option there would also be a need (to differing extents) to release site options on the urban fringes of Shepshed and Loughborough.

The scale of growth involved for option A1 would necessitate most of the site options at Shepshed and / or one of the larger site options to the south of Loughborough. The effects on heritage assets from expansion at Shepshed would not be anticipated to be significant, given that there are very few designated heritage assets at the urban fringe. At Loughborough, the potential for effects is somewhat higher, as there are a number of heritage assets close to the Charnwood Forest. Development here would likely change the setting of these assets. At this level of growth, it may be possible to avoid the most sensitive locations through site choice or lower density development. A **significant negative effect** is predicted at this stage, though there is potential for this to be avoided dependent upon the sites involved.

For options A2, and A4, the level of growth is less compared to option A1, and it ought to be possible to avoid growth in areas of greatest sensitivity. A **minor negative effect** is therefore predicted.

For options A3 and A5, the growth would be lesser still, and therefore it ought to be possible to avoid sensitive areas. An **uncertain negative effect** is predicted though as effects could still occur be dependent upon the sites that were allocated.

For option A6, the level of growth would be lower than options A1, A2, A3, A4 and A5, and thus even greater flexibility would be afforded. Therefore, the effects are predicted to be **neutral**.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3, B4 and B6 all involve substantially greater growth than any option under scenario A. The effects upon sites on the rural fringes are therefore more likely to occur. **Significant negative effects** are predicted, which may be more difficult to avoid, especially for option B2.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for Loughborough / Shepshed with regards to heritage. At the scale of growth involved, it is unlikely that the character of the built environment would be adversely affected. It should be possible to avoid sensitive sites and implement suitable mitigation.

### PUA:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Effects of development in Thurmaston and Birstall are predicted to be neutral. The site options are either industrial in nature, or on the edge of established housing estates. Neither contains important heritage assets, nor do they contribute positively to the character of the settlements. Likewise, site options adjacent to the A5630 are not likely to have effects upon the historic environment.

## Historic Environment

However, site options to the north of Keyham Lane West (at Hamilton Grounds Farm), could have significant negative effects upon the Deserted village of Hamilton Scheduled Monument. An open rural setting is important to the Scheduled Monuments, and thus development in this location (particularly on the adjacent site option) could alter its setting.

There are a mix of smaller scale site opportunities in the urban area of Syston, and larger greenfield site options to the urban fringes. Though some of the urban options fall within the conservation area it should be possible to secure sensitive design that brings about improvements to the built environment. For options A1, A2, A3, A5 and A6 there would also be a requirement to release land at the urban fringes. The scale of growth required should be possible to accommodate without having substantial effects on the character of Syston.

For options A1, A2, A3, A5 and A6, there would be a need to release the majority of available sites at the principal urban area and some sites within Syston. Whilst this would have neutral effects in the most part, it could have effects upon the deserted village of Hamilton Scheduled Monument. Avoiding development at the Hamilton Grounds Farm site ought to be possible at this level of growth though, which should minimise the potential for negative effects. Overall, an **uncertain negative effect** is predicted.

For option A4, the level of growth is lower, and it would therefore be much more possible to avoid growth at the Hamilton Farm sites. Therefore a **neutral effect** is predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve the same level of growth as options A1, A2, A3, A5 and A6. Therefore an **uncertain negative effect** is also predicted. Despite option B4 involving double the amount of growth as option A4, the effects are still predicted to be **neutral** as there is sufficient flexibility to avoid effects.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA with regards to heritage. At the scale of growth involved, it is unlikely that the character of the built and natural environment would be adversely affected. It should be possible to avoid sensitive sites and implement suitable mitigation.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5, A6 and A7 involve no growth in the 'other settlements' and so neutral effects are predicted.

Options A3 and A4 both involve growth at the other settlements, with option A4 also involving some growth at smaller villages and hamlets (but less at the other settlements compared to option A3). Modest growth at some of the other settlements ought to be accommodated without having significant effects upon the character of the settlements or the historic core. For example, site options in Queniborough are unlikely to lead to major changes to the approach to the settlement or having negative effects on historic features. Likewise, site options in East Goscote and Hathern should not be particularly sensitive to change.

At other settlements, the potential for effects is higher. For example, Thrussington as a relatively small settlement with a rural character could potentially be adversely affected by growth. The extent of the settlement would be increased, and this could affect approaches into the village. At higher scales of growth, significant negative effects could be generated.

At Wymeswold, development of sites could affect the rural 'feel' of approaches into the village along East Road and narrow Lane. Whilst low density, sensitive schemes could possibly be delivered, a change to the character of the settlement is likely. And so minor negative effects could be anticipated.

There are several site options in Rearsby, and the effects would be dependent on those which were allocated. Potentially, the character of the Conservation Area could be affected at higher levels of growth.

At the smaller villages and hamlets, the potential to affect the character of settlements is likely to increase given their smaller size, rural nature and in some instances sensitive locations (for example Newton Linfield). However, the scale of growth would be fairly low if spread across the Borough. Therefore, the effects would not be anticipated to be significant overall.

Overall, option A3 is predicted to have a **minor negative effect**. Growth at the other settlements could be accommodated in the main, without having a significant effect upon settlements.

## Historic Environment

However, in some instances, negative effects would need to be managed. This ought to be feasible though by reducing growth to sensitive settlements and / or delivering low density, sympathetic design to emulate the rural feel of these settlements. An uncertain effect is recorded in line with the precautionary principle.

Option A4 is predicted to perform similarly. Though the more dispersed nature of this option would mean that smaller villages and hamlets could be adversely affected, the effects ought to be minor overall for the other settlements. The lower level of growth at the 'other settlements' compared to option A3, should also allow for effects in these locations to be better managed too, and so the negative effects are less certain.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth in the 'other settlements' and so **neutral effects** are predicted. The growth for option B3 is broadly the same as option A3 and so a **minor negative effect** is predicted. Option B4 involves double the growth at the other settlements and smaller villages compared to option A4. Therefore, the likelihood that sensitive sites could be affected increases, and it may be more difficult to avoid or mitigate effects. Consequently, the negative effects are more certain. A **minor negative effect** is still predicted for the other settlements though as the level and spread of growth should still allow for significant effects to be avoided.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the other settlements with regards to heritage. At the scale of growth involved, it is unlikely that the character of the built and natural environment would be adversely affected. It should be possible to avoid sensitive settlements, sites and implement suitable mitigation.

## Small Villages and Hamlets

### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth under A4 would be very low in the context of overall development across the borough. However, housing development in such settlements could be substantial in the context of their scale and form. The majority of hamlets / small villages are designated as Conservation Areas and contain a number of listed buildings. Even a small amount of growth in these locations may alter the setting of the listed buildings as well as encroaching into the Conservation Areas. There should be some flexibility in the choice of sites and the spread of development to avoid significant effects in most locations and therefore only **minor negative effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth under B4 would still be relatively low in the context of overall development across the borough. However, the increased growth at the small villages and hamlets could lead to more notable effects on the character of these settlements and the setting of listed buildings. There is therefore potential for **significant negative effects** at some of these settlements.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at small villages and hamlets and so a **neutral effect** is predicted for C1.

## New / expanded settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

The new settlement at Barkby is adjacent to the conservation area. Whilst there are no heritage assets on site as such, a development of this scale next to Barkby has the potential to alter the setting of the village. It may be possible to retain a rural feel to the development, but this would require a much lower density development.

A new settlement at Wymeswold / Hoton sits adjacent to Hoton village conservation area. Development of the scale proposed could therefore alter the setting of this village substantially. A negative effect is predicted, but it is acknowledged that the inclusion of buffer zones between the village and the airfield part of the site could mitigate adverse effects and help to ensure that the character of the village is better protected.

Cotes is a small village with several listed buildings and an adjacent Scheduled Monument (Cotes deserted medieval village). An application for a large scale mixed use development was submitted (P/13/1842/2) to the

## Historic Environment

Council and Historic England considered that there could be substantial harm to the Scheduled Monument on the basis of the plans submitted. Though a new scheme here could be designed and laid out differently so as to reduce harm, the potential for negative effects clearly exists.

A new settlement at Thurstaston would expand the built form of the settlement. However, this would be unlikely to be visible from the existing village centre, or along most routes through the village. The exception would be along Thurstaston Lane, where a new settlement could be visible and potentially affect the rural feel of the village approach. The edge of the site to the north west would also be adjacent to Mill House Farmhouse (Grade II Listed Building). The setting of the building could be adversely affected, given that it has a rural context.

Overall, options A5 and A6 (which involve the new settlements) have the potential to have negative effects upon the historic environment (as discussed above). However, despite the scale of development involved, it ought to be possible to mitigate effects by ensuring development incorporates green infrastructure, buffer zones and sympathetic design. At the Cotes location however, there is evidence that development could cause substantial harm to heritage assets, and so the potential for significant negative effects is greater. Overall, a **minor negative effect** is predicted reflecting the potential for mitigation and the lower magnitude of effects at three of the four locations.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not involve growth at new settlements and therefore **neutral effects** are predicted. Option B6 involves the same level of growth as options 5 and 6, and so a **minor negative effect** is predicted also. As per options A5 and A6 there are uncertainties as to whether the effects could be significant.

### Scenario C (Discussion of options for delivering a standalone large settlement)

The effects on the historic environment will be largely dependent upon location. As this is not known for certain at this stage, there is an inherent degree of uncertainty in the assessment. Commentary is provided for the three broad areas of opportunity. To the west of Shepshed, a new settlement would not be likely to lead to a direct loss of heritage assets, nor should it affect the setting of heritage assets in Shepshed. Although there is a scheduled monument over the local authority boundary, it ought to be possible to mitigate effects on the setting of this asset. A new settlement to the east of Loughborough in the open countryside ought to be able to avoid direct effects upon designated heritage assets. Though the character of the landscape would be affected in this location, which could change the character of smaller settlements nearby, it should be possible to avoid significant effects on heritage. To the north east of the Leicester urban area a new settlement would likely be in the open countryside, and it ought to be possible to avoid the direct loss of heritage assets. However, there could potentially be effects on the setting of nearby assets and settlements. Overall, it is likely that significant negative effects could be avoided regardless of location. However, it is not possible to rule out adverse effects at this stage, and so a **minor negative effect** is recorded.

### **Overall effects**

Option A1 is predicted to have a **minor negative effect** overall across the district. Adverse effects would be avoided at the service centres and other settlements and there would be no new settlements. Whilst the effects at the PUA could potentially be avoided (hence an uncertain negative effect), there could be significant negative effects in Loughborough both within the urban area and at the urban fringes. Nevertheless, the lack of effects in sensitive locations throughout the Soar Valley, and the potential to minimise effects in Loughborough means that the effects are not significant overall across the borough when considered holistically.

For option A2, a **minor negative effect** is also predicted. However, the effects would be generated in different areas compared to option A1. Due to the scale of growth at the service centres, it might be difficult to avoid effects upon heritage assets in some settlements. There may also be greater potential to affect areas of archaeological value given past activity along the Soar Valley. The effects in Loughborough are less likely to be negative (compared to option A1), but there is some uncertainty for the PUA. Overall, a minor negative effect is predicted.

Option A3 could have potential negative effects at multiple locations across the district. However, it could be possible to avoid effects at the PUA, Service Centres and Loughborough/Shepshed. The effects upon other settlements are more likely to occur, but these are only minor. Overall, the effects are predicted to be **uncertain negative** as it may well be possible to minimise effects in the majority of the settlements.

Option A4 would have similar effects to option A3, but a lower growth in the PUA would mean that negative effects here were less likely. However, the effects at service centres and Loughborough would be more certain to occur. Overall, a minor negative effect is still predicted, reflecting effects on the character of a number of settlements across the district.

## Historic Environment

Option A5 is predicted to have an **uncertain minor negative effect** overall. There could be negative effects associated with the new settlements. However, the minor effects at Loughborough and the PUA, could probably be mitigated or avoided depending upon the location of sites involved and design. Neutral effects are also predicted for service centres and smaller settlements, which have sensitive character. The overall picture is therefore likely to be mostly neutral, but in line with the precautionary principle an uncertain effect is identified overall.

Option A6 is predicted to have similar effects to option A5, though the focus on service centres instead of Loughborough would be less likely to have negative effects. Overall an uncertain **minor negative effect** is predicted.

Options B2, B3, B4 and B6 are all predicted to have **significant negative effects** overall. Each option could have major effects in Loughborough, as well as at the service centres for B2, B3 and B4. Generally, the effects are lower at the other settlements and the PUA. Option B6 would have fewer effects across the district compared to options B2, B3 and B4, but still generate significant effects in Loughborough. Overall, the effects on multiple settlements, although minor is considered to be significant at the borough level when considered alongside the effects at Loughborough.

Though each of these options could generate significant negative effects, it is important to acknowledge that mitigation, avoidance (though more difficult at this scale of growth) and enhancement could be secured through accompanying plan policies. Therefore, this level of growth is not inherently significant with regards to the historic environment.

At this stage however, uncertainty about sites and the policies that would support the strategy means that a significant effect ought to be predicted.

Option C1 is predicted to have mostly neutral effects on heritage across the district due to the low levels of growth at existing settlements. Whilst a large new settlement would undoubtedly change the character of the countryside in whichever area it was located, it ought to be possible to avoid significant effects on heritage. There is potential for minor negative effects at a new settlement, but this is offset by the protection of assets throughout the rest of the borough. The overall impacts are therefore **uncertain minor negative effects**.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	--	-?	0	0	0	-
A2: Urban focus	-?	-	-?	0	0	0	-
A3: Settlement Hierarchy	-?	-?	-?	-	0	0	-?
A4: Proportionate growth	-	-	0	-?	-	0	-
A5: Urban intensification and new settlement	0	-?	-?	0	0	-	-?
A6: Urban focus and new settlement	0	0	-?	0	0	-	-?
<b>Scenario B – 15,700 homes</b>							
B2: Urban focus	--	--	-?	0	0	0	--
B3: Settlement Hierarchy	--	--	-?	-	0	0	--
B4: Proportionate growth	--	--	0	-	--?	0	--
B6: Urban focus and new settlement	-	--	-?	0	0	-	--
<b>Scenario C - Standalone new settlement</b>							
C1: Large scale new settlement	0	0	0	0	0	-	-?

## Population: Poverty and deprivation

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 do not propose growth in the service centres, and therefore the effects upon deprivation are not likely to be significant. The service centres are broadly characterised by low levels of multiple deprivation (with the exception of small pockets at Mountsorrel and Sileby that fall within the 20-40% most deprived areas. In the absence of growth, it is therefore unlikely that deprivation would worsen or improve to a significant degree. However, a lack of growth does not allow for the support of new social / community infrastructure. **Neutral effects** are predicted.

For option A2, and to a lesser extent option A4, there would be moderate growth at the service centres. Assuming a relatively even distribution of growth between the service centres, there is potential for positive effects in tackling pockets of deprivation through development contributions to schools, play areas and open space. This would be most beneficial in Mountsorrel and Sileby, where deprivation is slightly worse than at other service centres. Whilst increased growth could (conversely) have negative effects by increasing traffic congestion and putting pressure on services, the level of growth involved for these options is fairly modest, and so such issues ought to be avoided. On balance, the effects are likely to be **uncertain (minor) positive**, as the benefits in areas of greatest need would not be assured.

The slightly lower growth options A3 and A6 are unlikely to have a notable effect on levels of deprivation, and therefore **neutral effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B4 proposes 4,579 dwellings at service centres. Option B2 and option B3 propose similar, but slightly lower levels of growth. All three options would require maximisation of sites for development, which would result in less flexibility on deciding which sites should be brought forward. Whilst the increased level of growth would bring with it higher levels of traffic and potential amenity issues for existing communities, it should also bring more affordable housing and greater contributions to community infrastructure improvements that can help to tackle deprivation. On balance, a **minor positive effect** is predicted.

Option B6 proposes a similar level of growth at the service centres as option A4, therefore **uncertain minor positive effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

At very low levels of growth it is unlikely that deprivation would worsen or improve to a significant degree. However, a lack of growth does not allow for the support of new social / community infrastructure. The service centres are generally characterised by low levels of deprivation though and so **neutral effects** are predicted.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Option A (4,750 dwellings) and to a lesser extent option A4 (3,590) would bring the most growth to Loughborough and Shepshed and therefore have the greatest potential to impact upon poverty and deprivation in these areas. This level of growth could bring forward development on a more strategic level and potentially be able to tackle areas that fall within the top 10% most deprived areas in the UK, including Loughborough Storer and Loughborough Hastings ward that lie to the east of the city. If growth can be considered on a larger scale then the incorporation of enhanced or new facilities and schools could be brought forward alongside developments. There are a small number of sites available within the most deprived areas surrounding Loughborough and Shepshed which could be developed to help alleviate some of the issues relating to poverty and deprivation (i.e. affordable housing, play space). However, greater benefits could be derived if growth includes larger sites to the edge of the current built up area. These larger sites currently have low levels of deprivation, but in some places (e.g. to the south east of Loughborough) adjoin areas that have a higher level of deprivation. Therefore growth on a larger scale could provide greater opportunities to deliver the required infrastructure to support improvements that deprived communities can benefit from. A **significant positive effect** is predicted for option A1 and a **minor positive effect** for option A4.

Options A2, A3 and A4 all look to deliver between 2,000 – 3,000 dwellings split between both Loughborough and Shepshed. This level of growth would help to provide affordable housing and associated improvements to facilities, but at a lesser extent compared to option A1. The necessity to develop larger strategic sites would be lower for these options, and therefore, the benefits accrued may not be as substantial. Therefore, only **minor positive effects** are predicted. The increase in traffic generated as a result of growth would be unlikely to have significant effects upon deprived communities.

## Population: Poverty and deprivation

Option A5 (1,750) and to a greater extent option A6 (1,000) would bring forward the least amount of growth, which could be mainly accommodated by the smaller sites that sit within the urban area. Developing these sites could lead to small scale improvements in deprived areas by provision of affordable housing and community facilities such as play space. However, the scale of the sites and growth overall is unlikely to support strategic improvements to infrastructure. Therefore, the effects are likely to be very focused and it is uncertain if tangible benefits would be accrued. Conversely, a lack of substantial growth in Loughborough and Shepshed could help to alleviate pressure on existing services and infrastructure. On balance, **uncertain positive effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 proposes the highest level of growth to Loughborough and Shepshed (8,270 dwellings). This level of growth reaches the maximum SHLAA capacity, therefore all sites identified would have to be brought forward for development. This growth would help to secure more affordable homes, and would also be required to contribute towards enhancements to services and facilities including health, education and recreation. As well as the jobs created through growth, this option would therefore be likely to have positive effects in terms of helping to tackle deprivation. Sites adjacent to deprived areas would most certainly need to be developed, which could have particular benefits, if on-site facilities are accessible to existing communities. However, at this scale of growth there is also potential for more traffic and congestion in the urban area, which could affect deprived communities. A loss of open space at the urban fringe could also be perceived as negative by residents who access this land for recreation. In particular, there would be a loss of land adjacent to the Charnwood Forest. On balance a **minor positive effect** is predicted. It would be important to ensure that phasing of development took account of the capacity of facilities, or there may be potential for short term negative effects in terms of access to education and health facilities.

Options B3, B4 and B6 all propose around 7,000 new dwellings to Loughborough and Shepshed. These options would have similar effects to option B2 in terms of bringing new housing and infrastructure. As the level of growth is slightly lower, there would be less pressure to develop all sites, but the potential for negative effects would still exist given the need for the loss of open space, and an increased pressure on services and infrastructure (at least in the short term). Consequently, the effects are predicted to be positive, but not significant.

### Scenario C (Discussion of options for delivering a standalone large settlement)

At a low level of growth it is unlikely that deprivation would worsen or improve to a significant degree. However, a lack of growth does not allow for the support of new social / community infrastructure. Given that some parts of Loughborough fall within the top 20% deprived communities in the country, this could be viewed as a missed opportunity. Therefore, **uncertain negative effects** are predicted.

## PUA:

### Scenario A (Discussion of options for delivering 8,100 homes)

There are a number of sites that could accommodate growth on the edge of Leicester. Whilst the majority of these do not fall directly within areas of high multiple deprivation, they are adjacent to areas in the City that fall within the top 10 % deprived nationally (for example Stocking Farm ward in Leicester City is within the top 10%, also Rushley mead ward falls within the top 20% most deprived wards). Sites to the south-west of Syston and East Syston also fall within the top 30% most deprived wards in the country. Growth in these locations has the potential to benefit nearby communities through contributions to infrastructure improvements (social and physical), and greater availability of affordable housing. However, these areas are also in areas that could suffer negative implications. For example, traffic is expected to increase along the A563 and is likely to have the greatest impact on the deprived areas which are in the closest proximity to the road network. Therefore, positive effects are likely to be offset slightly by a loss of open space, increased traffic and short term pressure on existing services.

Options A1, A2, A3, A5 and A6 all propose a fairly modest amount of growth in the PUA. Though there could be some minor negative effects (as identified above), the positives should outweigh these and target growth to areas that are most in need of investment. Therefore, overall, a **significant positive effect** is predicted.

Option A4 (1,067 dwellings), would bring a lower level of growth to the edge of Leicester. Therefore, the effects (positive and negative) on deprivation would be less significant. An **uncertain minor positive effect** is predicted.

## Population: Poverty and deprivation

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2, B3 and B6 all propose the same level of growth as options A1, A2, A3, A5 and A6 discussed above. Therefore **significant positive effects** are also predicted.

Option B3 proposes a slightly lower level of growth (2,068). This is predicted to have a **minor positive effect**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Given the low level of growth involved, it is unlikely that deprivation would worsen or improve to a significant degree. However, lower levels of growth do not allow for the support of new social / community infrastructure. Given that some parts of the Leicester urban area fall within the top 20% deprived communities in the country, this could be viewed as a missed opportunity. **Neutral effects** are predicted.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 & A6 propose no development at other settlements and smaller settlements. These areas are mostly located in areas with low levels of multiple deprivation. Therefore, the need for regeneration and growth to tackle deprivation is not a priority here. Whilst a lack of growth would not help to tackle rural accessibility issues, it would be expected to have a **neutral effect** with regards to deprivation.

Option A3 and to a lesser extent option A4 propose a small level of growth to other settlements and villages. As these areas are generally characterised by low levels of deprivation, this growth would not be anticipated to have significant effects as it is small scale and not in priority areas. However, if increased growth is not matched sufficiently with enhancements to local facilities and services, levels of deprivation could perhaps decline in some domains. On balance, the effects are likely to be **neutral** in terms of levels of deprivation.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 propose no growth and thus a **neutral effect** is predicted as per options A1, A2, A5 and A6.

Whilst options B2 and B4 propose growth at the other settlements, the effects are also predicted to be **neutral** with regards to deprivation for the reasons discussed above for options A3 and A4.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 proposes limited development at other settlements and smaller settlements. These areas are mostly located in areas with low levels of multiple deprivation. Therefore, the need for regeneration and growth to tackle deprivation is not a priority here. Whilst a lack of growth would not help to tackle rural accessibility issues, it would be expected to have a **neutral effect** with regards to deprivation.

### **Small Villages and Hamlets**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. The level of growth under A4 would be low in the context of overall development across the borough. The smaller villages and hamlets are broadly located in areas of low deprivation, and so positive effects in this respect are unlikely to occur by locating small amounts of growth in these areas. Conversely, the amount of growth directed from other areas that could benefit more from growth is minimal. Therefore, **neutral effects** are predicted overall.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Therefore, **neutral effects** are predicted for all other options under this scenario. Though higher than growth under A4, the level of growth for B4 would still be low in the context of overall development across the borough. Therefore, **neutral effects** are still predicted overall.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

## Population: Poverty and deprivation

### New / expanded settlements:

#### Scenario A (Discussion of options for delivering 8,100 homes)

With the exception of Barkby, the new settlements are not located in areas that could be accessed by nearby communities with high levels of deprivation. Given that options A1, A2, A3, and A4 do not propose growth in new settlements, the effects are therefore likely to be **neutral** as no existing communities would be likely to be affected (positively or negatively).

Options A5 & A6 (3,000 homes) would look to bring forward growth to new settlements within Charnwood. A new settlement at Barkby, Wymeswold / Hoton, Thurcaston and Cotes could incorporate opportunities for new facilities to be provided alongside housing growth in order to create sustainable communities. Whilst this would not necessarily help to tackle deprivation in existing communities, it ought to ensure that future communities are less likely to become deprived (by ensuring they are sustainable to begin with). Growth at Barkby may also benefit deprived communities at Syston and Thurmaston, through improved access to associated services and facilities such as health care and formal open space. An **uncertain minor positive effect** is predicted as access is not immediate and might not be taken up by residents without access to a car.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not proposed any growth at new settlements, therefore effects are **neutral**.

Option B6, proposes the delivery of 3,000 dwellings to new settlements, the same as option A5 and A6 discussed above, therefore **uncertain minor positive effects** are also predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

A new settlement is unlikely to have direct benefits for deprived communities through the delivery of social infrastructure or access to facilities. However, the provision of new affordable homes with mixed tenures could present opportunities for some residents to access better quality housing. Whilst this would not necessarily help to tackle deprivation in existing communities, it ought to ensure that future communities are less likely to become deprived (by ensuring they are sustainable to begin with). An **uncertain minor positive effect** is predicted.

### Overall effects

Option A1 proposes the majority of growth to the PUA and Loughborough / Shepshed. Due to there being areas of deprivation in both these locations, there is potential to have significant positive effects. Though no growth is focused at other settlements across the borough, the levels of deprivation in these areas is broadly low, so the effects would be mainly neutral. The overall effects are still considered to be **significantly positive**.

For Option A2 the effects at the PUA would likely to be significantly positive too, but the positive effects in other locations are more uncertain. Therefore, a **minor positive effect** is predicted overall.

Option A3 proposes further dispersal away from the service centres to the other settlements. As deprivation is not a prevalent issue in the other settlements, the effects of growth in these locations is broadly neutral. Diverting growth from the service centres would reduce the potential positives in this area too. A **minor positive effect** is predicted overall reflecting the significant effects that would be generated at the PUA.

Option A4 proposes proportionate growth. This would direct less growth to the PUA and Loughborough and therefore lacks the positive effects in these locations. There is greater uncertainty about the positive effects in the PUA and the Service Centres too. Overall, this constitutes an **uncertain minor positive effect**.

Option A5 would also generate significant positive effects at the PUA. However, due to lower levels of growth in Loughborough, the positive effects are only minor. There could also be neutral effects at the service centres and other settlements. This creates a less positive picture across the borough overall, but there could also be some positive effects by creating new sustainable settlements. Therefore a **minor positive effect** is predicted.

Option A6 is similar to option A5, but the implications for the service centres would be neutral rather than potentially negative. This still equates to a **minor positive effect** overall.

Whilst Options B2 and B3 would have similar benefits with regards to the PUA, they both propose a substantial additional amount of growth at the service centres and Loughborough / Shepshed. The increased benefits from growth include more affordable housing and infrastructure investment. However, this large increase in growth could also have negative implications in terms of increased traffic and a loss of open space.

## Population: Poverty and deprivation

Therefore, the positive effects are only considered to be minor for Loughborough and the Service Centres. Overall, a **significant positive effect** is predicted as there would be benefits across most of the Borough, including in the most deprived areas.

Option B4 proposes proportionate growth, which would not achieve the same positive effects at the PUA compared to options B2, B3 and B6. The effects overall are predicted to be a **minor positive**.

Option B6 is similar to option A6, but a greater amount of growth at Loughborough would lead to more certain positive effects, and there would also be greater potential for positive effects at the service centres. Combined with a significant positive effect at the PUA and minor positives a new settlements, the overall effects are considered to be **positive significant effects**.

Option C1 is predicted to have neutral effects for most parts of the Borough owing to the large focus on one new settlement. At a new settlement, new communities ought to benefit from higher quality design and access to facilities and services, hence making it less likely that these areas will become deprived in the future. However, the benefits for existing communities are likely to be limited (i.e. to those moving into the area). Consequently, the overall effects are predicted to be **neutral**.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	++	++	0	0	0	++
A2. Urban focus	+ <sup>?</sup>	+ <sup>?</sup>	++	0	0	0	+
A3. Settlement Hierarchy	0	+ <sup>?</sup>	++	0	0	0	+
A4. Proportionate growth	+ <sup>?</sup>	+	+ <sup>?</sup>	0	0	0	+ <sup>?</sup>
A5. Urban intensification and new settlement	0	+ <sup>?</sup>	++	0	0	+ <sup>?</sup>	+
A6. Urban focus and new settlement	0	+ <sup>?</sup>	++	0	0	+ <sup>?</sup>	+
<b>Scenario B – 15,700 homes</b>							
B2. Urban focus	+	+	++	0	0	0	++
B3. Settlement Hierarchy	+	+	++	0	0	0	++
B4. Proportionate growth	+	+	+	0	0	0	+
B6. Urban focus and new settlement	+ <sup>?</sup>	+	++	0	0	+ <sup>?</sup>	++
<b>Scenario C - Standalone new settlement</b>							
C1. Large scale new settlement	0	0	0	0	0	+ <sup>?</sup>	0

## Population: Healthy and active lifestyles

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 do not propose growth in the service centres. Consequently, the loss of open space from new development would be less likely to occur. There are health facilities in these locations which are accessible, and a lack of further growth would mean that additional pressure on these services would be reduced. Conversely, a lack of growth does not allow for improvements to be made through development contributions to new or enhanced services, nor green infrastructure and recreational improvements. The effects are therefore predicted to be **neutral**.

Option A6 proposes the lowest level of growth to the service centres. The choice of sites ought to be flexible, and those with good access to health and recreational facilities could be developed. The effects on open space and recreation would be limited given the scale of growth at each Service Centre, but likewise, the effects on services and facilities would be less pronounced. Overall, **neutral effects** are predicted.

Option A3 proposes double the amount of growth compared to option A6, and so there could be increased pressures on open space and health facilities. Most of the service centres have at least one GP surgery, with the exception of Rothley, whereby increasing pressure would be put on nearby services at Mountsorrel. At this scale of growth, there may not be a critical mass to support new facilities. Where it is not possible to expand sites, residents may therefore need to travel further to access facilities and services, which is an **uncertain minor negative effect**. Conversely, a higher level of growth could (particularly on larger sites) present opportunities to secure local improvements to green infrastructure and open space provision. These are **uncertain minor positive effects**. Overall, a mixed effect is predicted.

Options A2 and A4 involve slightly higher growth compared to option A3. The increase in population would have the potential to put increasing pressure on existing health and leisure services, unless new / enhanced services were brought forward along with this proposed level of growth in housing. There would also be greater pressure to release greenfield land, which could be used for recreation. Consequently, **minor negative effects** could occur. However, growth also brings potential for enhancement, and the service centres are broadly well located in terms of access to recreation opportunities. **Minor positive effects** are also predicted. Overall, the effects are mixed.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B4 at the higher growth level proposes 4,579 dwellings at service centres. Option B2 and option B3 propose similar, but slightly lower levels of growth. Each of these options could have negative effects by putting substantial pressure on existing services. However, at the level of growth involved, it ought to be possible to support new facilities which would benefit new and existing communities. The larger sites that may be involved could also present more opportunities for strategic improvements to open space and green infrastructure. Consequently, a **significant positive effect** is predicted in the long term. However, **minor negative effects** are also predicted, as some residents may perceive a loss of open space as negative, and may suffer from poorer access to facilities in the short term.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

A low level of growth is predicted at the service centres. With regards to a loss of open space and recreational facilities, the effects are therefore likely to be neutral. Conversely, there are low chances of securing enhancement to green infrastructure. As the level of growth is low, the pressure on health facilities and other services would also be minor, and so **neutral effects** are anticipated.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Currently, there are two GP surgeries located in Shepshed, 4 within the built up area of Loughborough and an additional three GP surgeries dispersed between to the two areas.

By locating growth in locations close to the centre of town in Loughborough and Shepshed there is the opportunity to ensure good access to current health and leisure facilities, along with opportunities to improve access to open space, including green linkages throughout the built up area.

Sites able to accommodate larger growth are on the edges of the built up area. Therefore access to health services in these locations would be more distant unless new facilities were secured alongside development.

## Population: Healthy and active lifestyles

Option A1 (4,750) proposes the highest level of growth and some of the larger sites would need to be developed to achieve this target.

This could lead to a loss of open green space on the urban fringes, some of which is valuable as recreational space and is a gateway to the Charnwood Forest. Though enhancements might be delivered as part of development, the potential for negative effects exists. The pressure on health services would also be substantial at this level of growth, so enhancement or new facilities would be required. At this scale of growth, there remains some flexibility in the choice of sites and densities, so it ought to be possible to plan for health and recreation positively. However, a potential **minor negative effect** is predicted to reflect these issues. **Significant positive effects** are recorded relating to good accessibility in the urban centre to health facilities and enhancement opportunities at the urban fringe.

Options A2 and A4 have the potential to direct development to some of the smaller more accessible sites within the built up urban areas, alongside a smaller number of large sites on the edge of Loughborough and Shepshed, which could create the critical mass for new facilities. The larger sites could also bring opportunities to create new recreational spaces, which could encourage participation in recreation without resulting in wholesale development of open space at the urban fringes. Whilst these are positive effects, they are less likely to be significant compared to option A1. However, the negative effects are also less likely to be prominent.

Options A3 and A5 propose slightly lower growth than options A2 and A4, and so it ought to be possible to avoid negative effects. However, the likelihood of positive effects occurring is also more uncertain.

Option A6 proposes the least growth to sites located close to Loughborough and Shepshed. If development was focused on the smaller sites within the current built up urban area, there would be good access to existing health facilities, and avoidance of the loss of open space. Whilst there may be additional pressure put upon the existing services, they should be able to accommodate this level of growth dispersed across the urban area. Conversely, there are less opportunities to provide new services, or to improve access to open space and promote/provide recreational facilities at the urban fringe. Consequently, **neutral effects** are predicted overall.

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 would deliver the highest level of growth to Loughborough and Shepshed (8270 dwellings). To a lesser extent option B3, B4 and B6 propose around 7,000 new dwellings. The effect this could have on healthy and active lifestyles in the area could be significant as large amounts of greenfield land would be needed to deliver this growth, along with increasing pressures on existing health services and recreational facilities. There would be a need to deliver development on large sites for each of these options, which ought to support new health and recreational facilities if planned strategically. This could have **significant positive effects** for new communities, but also for those in surrounding areas (some of which have high levels of deprivation) that could access these new facilities and also improve links into the Charnwood Forest if well designed. Conversely, in some areas, there would be a loss of open space and a lack of new health and leisure facilities, meaning that communities in these areas could be negatively affected.

The strategic nature of development that would be required to deliver these levels of growth could also mean that new services and facilities are not delivered in the early phases. This could generate short term negative effects. Overall mixed effects are predicted, with both the positives and negatives being significant.

### Scenario C (Discussion of options for delivering a standalone large settlement)

At the level of growth proposed, the likelihood of effects upon health services are minor, and so neutral effects would be anticipated. Likewise, there would be minimal loss of open space and recreation. However, opportunities to secure enhancements to public facilities and green infrastructure through development would be limited. Therefore, the overall effects in this area are likely to be neutral.

## PUA:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 (3,350 dwellings) all focus growth to the edge of Leicester into the urban area of Thurmsaston, Birstall and Syston. These areas all have reasonable access to health facilities and recreational facilities (for example Watermead Country Park), so new development ought to be well located in this respect, which is positive. The level of growth involved however could put pressure on these facilities unless supported by enhancements, which is a potential negative effect. The level of growth and sites involved ought to allow for such enhancements, though some existing facilities could be unable to expand. An **uncertain negative effect** is predicted in this respect.

Development on some sites which are currently privately owned could lead to improved access to open green space if enhancements are secured to green infrastructure. This could help to increase participation of physical

## Population: Healthy and active lifestyles

activity helping to improve health and wellbeing. Therefore; **minor positive effects** are also predicted.

Option A4 proposes 1,067 new dwellings at the edge of Leicester. This level of growth could also put pressure on existing services, but would be less likely to impact upon open green space. Therefore, it ought to be possible to avoid negative effects for this option. The likelihood of positive effects occurring would be lower though, so a **neutral effect** is predicted overall.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 all propose the same level of growth at options A1, A2, A3, A5 and A6 discussed above; therefore mixed effects are predicted also.

Option B2 proposes to deliver 2,068 dwellings to the PUA. This could put pressure on health services in the area, and may involve a greater risk of open green space being affected (compared to option A4). However, there is also a greater potential for enhancements to green infrastructure being secured. Compared to options B2, B3 and B6, the certainty of positive effects occurring would be lower, so an **uncertain positive effect** is predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

A low level of growth is predicted at the urban fringes of Leicester. With regards to a loss of open space and recreational facilities, the effects are therefore likely to be neutral. Conversely, there are low chances of securing enhancement to green infrastructure. As the level of growth is low, the pressure on health facilities and other services would also be minor, and so **neutral effects** are anticipated.

## Other settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 and A6 involve no growth in the 'other settlements' and so **neutral effects** are predicted with regards to healthy lifestyles. Without substantial growth in these areas, the critical mass for new health facilities would not be generated, and so it would only lead to more people having to travel further to access facilities if additional growth was located here. The lack of development would also help to protect green and open space, which is used for recreation.

Options A3 and A4 involve growth at the other settlements, with option A4 also involving some growth at smaller villages and hamlets (but less at the other settlements compared to option A3). Modest growth at some of the other settlements ought to be accommodated without having significant effects upon the health and active lifestyles of the population. However, an increase in the population at settlements that current have no GP surgery and leisure facilities would mean that access to services was poor for some new residents. This would lead to a need to travel to higher order settlements (For example, residents at Queniborough, East Goscote and Thrussington may need to use GP services at Syston). A **minor negative effect** is recorded in this respect for both options.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth in the 'other settlements' and so **neutral effects** are predicted.

Options B3 and B4 pose a similar level of growth to other settlements as option A3 discussed above, therefore **minor negative effects** are predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

A low level of growth is predicted at the other settlements. With regards to a loss of open space and recreational facilities, the effects are therefore likely to be neutral. Conversely, there are low chances of securing enhancement to green infrastructure. As the level of growth is low, the pressure on health facilities and other services would also be minor, and so **neutral effects** are anticipated.

## Small Villages and Hamlets

### Scenario A (Discussion of options for delivering 8,100 homes)

Only option A4 would involve growth at the hamlets and small villages. Development here would have poor access to health facilities and other services and would not generate the demand for local improvements. Therefore, access to health for new residents would be reliant on car travel. The loss of open space is also likely

## Population: Healthy and active lifestyles

to occur, but this should not affect the wider accessibility to the countryside given the location of such settlements.

Overall, the effects are likely to be **neutral** given the very low level of new development involved.

### Scenario B (Discussion of options for delivering 15,700 homes)

Only option B4 would involve growth at the hamlets and small villages. Development here would have poor access to health facilities and other services and would not generate the demand for local improvements. Therefore, access to health for new residents would be reliant on car travel. The loss of open space is also likely to occur, but this should not affect the wider accessibility to the countryside given the location of such settlements. Overall, the effects are likely to be **minor negative** for B4 on a local basis.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets and so a **neutral effect** is predicted for C1.

## **New / expanded settlements:**

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, and option A4 do not propose growth at other settlements, and therefore effects are **neutral**. There are no existing communities likely to be affected.

Option A5 and A6 (3,000 dwellings) could deliver a significant amount of growth to new settlements. There are limited health and leisure services within the close vicinity of the new settlements at present, with nearby settlements mostly reliant on the service centres for health and leisure facilities. However, at such a scale of growth it ought to be possible to create the critical mass for new satellite health facilities to serve new communities (and any nearby lower order settlements such as Barkby, Wymeswold, Hoton). Therefore, the new communities ought to be well served by health and community facilities.

The scale of the sites should also help to secure accessible green infrastructure for new residents, and for nearby communities if good links are created. Given that these areas are not specifically used for recreation at present, this could be an improvement on the baseline position and could be a significant positive effect. However, without scheme details, it is not possible to be certain about the extent of positive effects, so a **minor positive effect** is predicted at this stage.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not propose growth at new/expanded settlements, and therefore effects are **neutral**. Options B6 proposes the same level of growth as options A5 and A6, therefore a **minor positive effect** is predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 would involve a significant amount of growth at one new settlement. At the scale of growth involved, there would be a requirement to deliver new education and health facilities. Therefore new communities would be likely to be well served.

Nearby settlements may also benefit from access to new improved facilities (though it is unclear which these would be at this stage). There would be a loss of large amounts of open countryside, but it is less likely that this would be used by communities (such as open space on the fringes of larger settlements).

A new settlement would also be expected to incorporate garden village principles and so green infrastructure improvement should be a key element of the development(s). Consequently, access to quality greenspace for recreation ought to be good for residents in these areas. A **significant positive effect** is predicted overall to reflect the likelihood of new facilities being established and enhancements to green infrastructure. The benefits would only be likely to accrue in the longer term though as a new settlement of this scale would require considerable planning.

## **Overall effects**

Option A1 is predicted to have a **minor positive effect** overall across the borough. Whilst the effects across much of the borough would be neutral, there could be significant positive effects in Loughborough and minor benefits at the PUA. However, there may also be negative effects for some communities in Loughborough which

## Population: Healthy and active lifestyles

offset the positives somewhat.

Option A2 is less likely to generate a significant positive effect in any one location, and there may be mixed effects at the service centres, Loughborough/Shepshed and the PUA. However, the positives are more pronounced and are likely to outweigh the negatives overall. A **minor positive effect** is predicted overall.

Option A3 is likely to have less prominent and more uncertain effects due to the dispersal of growth, both positive and negative.

Whilst the loss of open space in any one location would be lower, opportunities to deliver new facilities along with population growth could be more limited due to the growth being dispersed.

Growth at the other settlements would also lead to negative effects by placing people in less accessible areas. Overall, a **neutral effect** is predicted, as there could be gains and losses in different areas, but no significant change Borough trends.

Option A4 is predicted to have similar effects to option A3, though there would be less potential for positive effects at the PUA, and greater potential for negative effects at the service centres. Conversely, the positive effects are more certain at the service centres and Loughborough / Shepshed. Overall, a **neutral effect** is predicted, as there could be gains and losses in different areas, but no significant change to Borough trends.

Options A5 and A6 are both predicted to have **minor positive effects** overall. Neither option is likely to generate significant negative effects, and in the main, the effects would be neutral across the borough with the exception of the PUA and at new settlements. In particular, the new settlements could create new facilities and enhancements to green infrastructure that benefit new and existing communities.

Option B2 delivers a substantial amount of growth to Loughborough / Shepshed and the Service Centres. This would necessitate the development of larger sites in these areas and could create the critical mass to support new health facilities. Though there would be significant loss of open space, there could be enhancement to recreational facilities, and overall the positive effects should outweigh the negatives in these locations. Overall, a **minor positive effect** is predicted.

Option B3 would have similar effects to option B2, but there could be negative effects at the other settlements associated with poor access to facilities. Overall, a **minor positive effect** is predicted.

Option B4 proposes proportionate growth, which also involves substantial growth at Loughborough/Shepshed. The effects here are therefore similar to options B2, B3 and B6. However, the positive effects at the service centres and the PUA would be less pronounced due to fewer opportunities to support new and enhanced facilities. Minor negative effects are also predicted for the other settlements and the small villages and hamlets. An **uncertain positive effect** is predicted overall, as it is more likely, but unclear whether the positives would outweigh the negatives.

Option B6 is likely to have similar effects to option B2, but with the additional benefits that could be generated at the PUA. Consequently, a **significant positive effect** is predicted overall.

Overall, option C1 is predicted to have a minor positive effect with regards to health and wellbeing. There would be mostly neutral effects across much of the borough due to low levels of planned development. Whilst this would reduce pressure on facilities and open space, it would not help to instigate improvements.

Significant growth at a new settlement would ensure new communities have good access to health and educational facilities, open space and perhaps other leisure facilities. This would have significant benefits in this location, but only in the longer term. On balance a **minor positive effect** is predicted across the borough as a whole as the significant positive effects would be concentrated in one location and only accrue in the long term, possibly beyond the plan period.

	Service centres		Loughborough		PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>									
A1: Urban intensification	0	-	++	-?	+	0	0	0	+
A2. Urban focus	-	+	-?	+	-?	+	0	0	+
A3.Settlement Hierarchy	-?	+?	0	+?	-?	+	-	0	0
A4. Proportionate growth	-	+	-?	+	0	-	0	0	0
A5. Urban intensification and new settlement	0	0	+?	-?	+	0	0	+	+
A6. Urban focus and new settlement	0	0	0	-?	+	0	0	+	+
<b>Scenario 2 – 15,700 homes</b>									
B2. Urban focus	-	++	--	++	-?	+	0	0	+
B3. Settlement Hierarchy	-	++	--	++	-?	+	-	0	+
B4. Proportionate growth	-	+?	--	++	-?	+?	-	0	+?
B6. Urban focus and new settlement	-	++	--	++	-?	+	0	+	++
<b>Scenario C - Standalone new settlement</b>									
C1. Large scale new settlement	0	0	0	0	0	0	0	++	+

## Population: Housing

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Should the objectively assessed housing need be achieved, this would lead to positive effects on housing. However, setting a target in line with the OAN, does not necessarily mean it will be achieved if there are issues of deliverability and phasing. Therefore, at this scale of growth, the potential for significant positive effects could be reduced somewhat.

The distribution of housing is also important to ensure that a wide range of communities benefit from growth, and that development occurs in appropriate, attractive locations.

Options A1, A5 and B2 do not propose growth in the service centres, and therefore **minor negative effects** could occur here as it would not support a growth in population for these settlements. As higher-order settlements with good access to services and jobs, having no planned growth in these areas may not help to tackle local needs and market demands.

For option A4, and to a lesser extent options A2 and A3, there would be growth at the service centres. Therefore larger levels of growth around these service areas is likely to make a positive contribution to delivery and affordability, although in the more rural locations, there would be less opportunity to address affordability. There is likely to be sufficient land capacity to deliver all the options due to the level of growth being below the SLHAA capacity, however the higher levels of growth there could be particular needs for supporting infrastructure to make such growth deliverable. Due to these peripheral locations typically having higher house prices than areas within the surrounding larger settlements within Charnwood, growth here could help to impact affordability. Option A4 is predicted to have a **significant positive effect** on housing provision and at the slightly lower level of growth, option A2 and A3 could provide **moderate positive effects**.

The lowest level of growth would be through option A6 (750 dwellings), which once dispersed across all the service centres would not bring forward a significant number of homes to each area, therefore only **minor positive effects** could be realised.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B4 at the higher growth level proposes 4,579 dwellings at service centres. Option B2 and option B3 propose similar, but slightly lower levels of growth. Therefore, **significant positive effects** in terms of housing numbers for service centre, as a greater mix in housing types could be delivered on a range of sites.

Option B6 proposes a similar amount of growth as option A4, therefore, it could be predicted that **significant positive effects** could also be felt.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves a very limited amount of growth in the Service Centres, therefore **minor negative effects** could occur as it would not support a growth in population for these settlements. As higher-order settlements with good access to services and jobs, having no planned growth in these areas may not help to tackle local needs and market demands.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

There are a number of sites able to accommodate growth around Loughborough and Shepshed. The SHLAA capacity is 8,270, which none of the options for growth put forward, therefore there ought to be good flexibility in the choice of sites for allocation. This increased flexibility could help provide homes that meet the need of the community in specific locations, resulting in an adequate supply of housing and ensuring an appropriate mix of dwelling size, type and tenure. Sites within the current built up area could present opportunities to make better use of the current building stock.

Option A1 proposes the highest level of growth, which ought to be most positive with regards to the contribution to deliverability and affordability. This option should best help to meet the needs of the community in this location and therefore, **minor positive effects** are predicted.

Option A4 and to a lesser extent options A2 and A3 would deliver a moderate amount of additional housing to the current stock at Loughborough and Shepshed, contributing to additional affordable and specialist housing. This contributes to a **minor positive effect** in these locations.

Options A5 and to a lesser extent option A6, could also deliver additional housing, but due to the lower level of growth the effects would be less prominent.

## Population: Housing

Given the potential for some sites to only be deliverable in the longer term, the effects are predicted to be **uncertain positive effects**.

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 would deliver the highest level of growth to Loughborough and Shepshed. To a lesser extent options 8, B4 and B6 propose around 7,000 new dwellings. Therefore, the extent of opportunities for mixed housing to the area is high, resulting in **significant positive effects** for Loughborough and Shepshed. The flexibility afforded by the wide range of sites available ought to ensure that opportunities for growth exist throughout the plan period.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves a very limited amount of growth at Loughborough / Shepshed; therefore **minor negative effects** could occur as it would not support a growth in population for these settlements. As the largest settlements in the borough with good access to services and jobs, having no planned growth in these areas may not help to tackle local needs and market demands.

## PUA:

### Scenario A (Discussion of options for delivering 8,100 homes)

Option A1, A2, A3, A5 and A6 (3,350 dwellings) all propose growth to the edge of Leicester. Given that there is a demand for housing in Leicester City, meeting needs on the periphery is likely to have benefits for communities in these locations, and also those looking to maintain a connection to the City. **Minor positive effects** are predicted.

Whilst option A4 proposes a lower level of growth of 1,067 dwellings. This option would not take the opportunity to help meet needs where they are arising (i.e. within close proximity to Leicester), and therefore, a **neutral effect** is predicted with regards to housing (this level of growth may be anticipated anyway given it represents a proportionate approach).

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2, B3 and B6 all propose the same level of growth at options A1, A2, A3, A5 and A6 discussed above, therefore **minor positive effects** are predicted.

Option B4 proposes to deliver 2,068 dwellings to the PUA. This level of growth ought to help to contribute towards meeting needs and tackling affordability. However, the effects are less certain compared to options B2, B3 and B6.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves a very limited amount of growth at the PUA; therefore **minor negative effects** could occur as it would not support housing delivery for communities in this area. Given the close proximity to Leicester City and the inability to meet needs in the City itself, this could be negative with regards to housing provision in an area of need.

## Other settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 and A6 do not propose growth in the other settlements, and therefore effects are predicted to be negative here. There would be limited support for new housing in these locations beyond windfall development, and therefore it may be difficult to tackle rural affordability issues. These locations are also attractive for market development. **Minor negative effects** are predicted as the magnitude of effects are small.

Option A3 and to a lesser extent option A4 (which disperses growth further) ought to have minor positive effects by supporting a modest amount of growth in the other settlements. Therefore, **minor positive effects** are predicted for both options.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth in the 'other settlements' and so **minor negative effects** are predicted.

## Population: Housing

Options B3 and B4 propose a similar level of growth to other settlements as option A3 discussed above, therefore **minor positive effects** are predicted. For option A4, which proposes almost double the amount of growth to other settlements and smaller settlements combined, there ought to be a **significant positive effect** in terms of the provision of housing need in rural areas and supporting the viability of these communities.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves no growth in the 'other settlements' and so **minor negative effects** are predicted.

### **Small Villages and Hamlets**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 do not propose growth in the small villages and hamlets, and therefore effects are likely to be neutral or possibly negative should there be specific demand in such areas. There would be limited support for new housing in these locations beyond windfall development, and therefore it may be difficult to tackle rural affordability issues. **Uncertain minor negative effects** are predicted as the magnitude of effects is small and the suitability for housing in these locations is questionable given their lack of services and facilities.

Option A4 which disperses growth to include small villages and hamlets could have some benefits for a limited number of people. However, the benefits would be offset by the likelihood that housing in these locations would not deliver accessible homes that communities need. Overall, a localised **minor positive effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve no growth in the small villages and hamlets and therefore **uncertain minor negative effects** are predicted (as per options A1, A2, A3, A5, A6).

Option B4 proposes almost double the amount of growth to smaller settlements which ought to have **minor positive effects** with regards to allowing the market to deliver homes. However, the amount of housing would not be enough to support new facilities, and would therefore be unsustainably located. This offsets the positive effects somewhat.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets so an **uncertain minor negative effect** is predicted for C1.

### **New / expanded settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3 and A4 do not propose growth in new settlements, and therefore effects are **neutral**. The effects are neutral as not developing new settlements would not directly lead to a decline in housing availability and affordability in existing settlements.

Options A5 and A6 both involve substantial housing provision through sites at new settlements and expansion to other settlements within the plan area. This could contribute to meeting the borough's housing needs, and could provide a mix of types of housing that could generate more affordable housing compared to other 'sub' market areas with well-established values. However, the delivery of growth may be affected by the reliance on infrastructure required to support this level of growth. **Minor positive effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not propose growth at new/expanded settlements, and therefore effects are **neutral**.

Option B6 proposes the same level of growth as options A5 and A6, therefore **minor positive effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves substantial housing provision through one large settlement. It is unknown where this would be, but the beneficial effects would be mostly restricted to the settlement and nearby communities. The housing delivered could contribute to meeting the borough's housing needs, and could provide a mix of types of housing that could generate more affordable housing compared to other 'sub' market areas with well-established values.

## Population: Housing

However, the delivery of growth may be affected by the reliance on infrastructure required to support this level of growth and provision would most likely not be delivered in full within the plan period.

The ability to achieve a 5 year housing supply may also be affected with over-reliance on one large site that would need to be appropriately phased. Consequently, the overall effects on housing are likely to be mixed.

**Minor negative effects** are recorded for the short term, with **minor positive effects** in the longer term.

### Overall effects

#### Scenario A (Discussion of options for delivering 8,100 homes)

Dependent upon the size, location and complexity of development of the sites involved, planning to deliver a housing target in-line with the OAHN may fall short of actually achieving this level of housing growth. Therefore, significant positive effects are not predicted to be likely for any of the options under Scenario A.

Option A1 proposes the majority of growth around the PUA and Loughborough/Shepshed. Whilst this could result in positive effects in these areas with regards to housing delivery, it would not help to meet needs in the service centres and rural locations. These negative effects could offset the benefits achieved in Loughborough and the PUA somewhat, and so the positive effects are **uncertain (and minor)**.

Option A2 would generate minor positive effects across a range of settlements, including Loughborough / Shepshed, the service centres and the PUA. By spreading development more widely across the borough, more communities would be likely to benefit and the range of sites would be increased. Therefore, despite potential negative effects in the 'other' and smaller settlements, a **minor positive effect** is predicted overall.

Option A3 disperses growth across a larger number of sites, which could present a greater opportunity to meet 'local needs' in a range of settlements, including those in the other settlements. This could help to deliver a mix of housing types in different locations, and help to increase the affordability of these areas by increasing the current housing stock. Whilst there could be some very localised minor negative effects related to the smaller villages and hamlets, a **minor positive effect** is predicted overall.

Option A4 proposes proportionate growth across according to the settlement hierarchy. This would lead to positive effects in the existing centres of population, helping to meet needs in a variety of locations (to different extents). However, this option would do less to meet needs in the PUA, which is a missed opportunity to help tackle affordability and housing availability in the wider City. Nevertheless, the overall effects across the borough are likely to be **minor positive**.

Option A5 proposes growth at the largest built-up urban areas around the edge of Leicester and Loughborough/Shepshed, along with significant growth at new settlements. This presents opportunities to grow the housing stock around these areas and ensure an appropriate mix of dwellings are delivered at new settlements. However, strategic infrastructure may need to be delivered at new settlements to allow housing to come forward at this scale over the plan period. The lack of growth in the service centres and other settlements could also be negative in respect of (not) helping to tackle housing needs in these areas. On balance, positive effects ought to be achieved across the district, but there is greater uncertainty associated with this option given the negative effects at some settlements and potential deliverability/phasing issues associated with large settlements. **Uncertain positive effects** are predicted.

Option A6 proposes similar growth to option 5 with additional growth at service centres rather than at Loughborough / Shepshed. The effects are therefore similar to option A5, but the potential for negative effects is reduced for the service centres. The overall effects are therefore predicted to be less uncertain for the borough as a whole, so **minor positive effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Growth at this higher level should provide greater flexibility in the choice of sites, which makes it more likely that the objectively assessed housing needs would be met over the plan period. The greater number and types of sites should also ensure that the needs of a variety of communities could be met. Consequently, options B2, B3, B4, B6 are all predicted to have **significant positive effects** overall.

However, the relative performance at different settlements differs slightly, with options B2, B3 and B6 potentially having negative implications for the lower order settlements.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 is predicated to have mixed effects on housing over the plan period.

## Population: Housing

There is little provision for the majority of existing settlements across the Borough, and so potential negative effects are recorded.

Whilst provision of new housing at a large scale new settlement is likely to have **minor positive effects** in the longer term, it is probable that the full housing needs would not be met in the plan period and a 5 year supply may be difficult to achieve. Consequently, **minor negative effects** are predicted also.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects		
<b>Scenario A – 8,100 homes</b>									
A1: Urban intensification	-	+	+	-	-?	0	+?		
A2: Urban focus	+	+	+	-	-?	0	+		
A3: Settlement Hierarchy	0	+	+	+	-?	0	+		
A4: Proportionate growth	+	+?	0	+	+	0	+		
A5: Urban intensification and new settlement	-	+?	+	-	-?	+	+?		
A6: Urban focus and new settlement	0	+?	+	-	-?	+	+		
<b>Scenario B – 15,700 homes</b>									
B2: Urban focus	++	++	+	-	-?	0	++		
B3: Settlement Hierarchy	++	++	+	+	-?	0	++		
B4: Proportionate growth	++	++	+?	++	+	0	++		
B6: Urban focus and new settlement	+	++	+	-	-?	+	++		
<b>Scenario C - Standalone new settlement</b>									
C1: Large scale new settlement	-	-	-	-	-?	+	-	+	-

## Local economy

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 do not propose growth in the service centres, and therefore effects are predicted to be **neutral**.

For option A4, and to a lesser extent options A2 and A3, there would be growth at the service centres, which would likely have a positive effect on the service centres local economies. An increase in homes would help to provide accommodation for workers. If housing is located in accessible locations, via the transport network, this could help support the expansion of economic/employment hubs. The larger service centres located along the Soar Valley provides a variety of industrial employment opportunities, including activities related to mineral extraction, textiles and engineering. There would also be job creation to construct homes in these service centres. Overall, a **minor positive effect** is predicted.

Option A6 (750 dwellings) delivers a lower level of growth, which is unlikely to have a significant effect at any of the service centres. Therefore, **neutral effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Option B4 at the higher growth level proposes 4,579 dwellings at service centres. Option B2 and option B3 propose similar, but slightly lower levels of growth. Growth at this level would help to generate jobs for the construction of homes in these locations, whilst also placing new development in settlements with relatively good access to jobs in the larger centres of Leicester and Loughborough. An increase in housing should also help to support increased local spending. **Significant positive effects** are predicted.

Option B6 proposes a similar amount of growth as option A4; therefore, therefore **minor positive effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Options C1 proposes a very low level of growth across the service centres, and therefore effects are predicted to be **neutral** with regards to the local economies in these areas.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Loughborough is the Boroughs principle employment centre and over the years has diversified from a traditional textile and engineering base into pharmaceuticals, general manufacturing services, and warehousing and distribution. A key component of the service sector is research and development. This area offers strong new employment potential especially through the development of the Science Park off Ashby Road, which Charnwood Borough Council has identified as a key employment location, along with the enterprise park. A further boost to this sector has been the arrival of AstraZeneca at Loughborough Industrial Park, following their take-over of Fisons Pharmaceuticals. Both Loughborough University and Loughborough College of Further Education are both critically important to the local economy.

Shepshed has moved from a traditional reliance on manufacturing towards distribution firms and facilities. These are taking advantage of a location adjacent to Junction 23 of the M1. The town has strengthened economic links with Loughborough in recent years also.

Both locations should also be able to benefit from job opportunities at the East Midlands Gateway.

Option A1 (4,750) proposes the highest level of growth under scenario A. Growth here would link homes to job opportunities very well, and would help to support local services and facilities. Also, this level of growth may support opportunities to create/expand current employment hubs, allowing the continuation of employment rates around Loughborough and Shepshed and job diversification. New development could help to provide accommodation for the working age population due to the delivery of a diverse range of housing to the area. Therefore, for option A1 **significant positive effect** could be predicted.

Options A2 and A3 and to a lesser extend option A4 has the potential to direct development to some of the smaller more accessible sites within the built up urban areas, alongside some large sites on the edge of Loughborough and Shepshed. Therefore, there could be opportunities to link up new development with the existing employment centres, via public transport. Provision of homes in the periphery could help to tackle deprivation in the City itself, should it help to provide accommodation for such communities along with increased job diversification. **Minor positive effects** are predicted for this level of growth.

Option A6 (1,000) and to a lesser extent option A5 propose the least growth to sites located close to Loughborough and Shepshed.

## Local economy

Therefore, there would be fewer opportunities to support economic growth around Loughborough. However there would also be less competition for jobs in the area. It is less likely that positive effects would be generated, and therefore, **uncertain minor positive effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2 would deliver the highest level of growth to Loughborough and Shepshed. To a lesser extent, options B3, B4 and B6 propose around 7,000 new dwellings. Growth for all these options would provide substantial amounts of new housing in Loughborough and Shepshed, which would provide accommodation to support jobs growth in this area. This level of growth could also support infrastructure improvements and local spending. **Significant positive effects** are predicted.

At this level of growth however, there could be increased competition for jobs should there be increased migration into the area. The large scale level of growth could also put pressure on transport routes, which could have negative implications. **Uncertain minor negative effects** are predicted to reflect these issues.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Options C1 proposes a very low level of growth at Loughborough / Shepshed, and therefore effects are predicted to be **neutral** with regards to the local economies in these areas.

## PUA:

### Scenario A (Discussion of options for delivering 8,100 homes)

Option A1, A2, A3, A5 and A6 (3,350 dwellings) all propose growth to the edge of Leicester into the urban area of Thurmaston, Birstall and Syston. The delivery of homes to the Leicester urban periphery should provide homes that have good access to jobs in the city, and further afield should there be connections to the strategic road networks. However, access to a large proportion of these jobs outside of Leicester could rely on the private car, and so certain communities might not benefit. Provision of homes to the edge of Leicester could help tackle deprivation in the worst affected wards, should it help to provide accommodation and job opportunities to such communities. Housing provision close to the City and surrounding employment hubs (for example the Global Technologies Hub) could also help to improve graduate retention (access to higher quality jobs) and fill gaps in the market (leisure and creative industries), which is something that is currently lacking across the whole of Charnwood. Therefore, **significant positive effects** are predicted.

Option A4 proposes 1,067 new dwellings at the edge of Leicester. This level of growth could be accommodated on some of the smaller sites located around the urban areas of Thurmaston, Birstall and Syston. However, this level of growth may be expected to be absorbed by these settlement areas, without providing any significant economic boost. Therefore, **neutral effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Option B2, B3 and B6 all propose the same level of growth as options A1, A2, A3, A5 and A6 discussed above, therefore **Significant positive effects** are also predicted.

Option B4 proposes to deliver 2,068 dwellings to the PUA. This level of growth is lower than those discussed above, therefore **minor positive effects** are predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Options C1 proposes a very low level of growth across the PUA, and therefore effects are predicted to be **neutral** with regards to the local economies in these areas.

## Other settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 and A6 involve no growth in the 'other settlements' and so **neutral effects** are predicted.

Options A3 and A4 involve a limited amount of growth at the other settlements, with option A4 also involving some growth at smaller villages and hamlets (but less at the other settlements compared to option A3). In general, the smaller towns and villages already struggle to provide local job opportunities for skilled workers. Therefore, growth in these locations would be likely to result in greater levels of commuting. Growth in the rural areas would also do little to address regeneration, as most of these locations are affluent. It would also draw investment away from more suitable locations for economic growth such as the Service Centres, PUA and Loughborough/Shepshed.

## Local economy

Given that the magnitude of growth here is low, only **minor negative effects** are predicted. Conversely, increased housing in these areas could help to support an increase in spending in the other settlements, which ought to be positive for local businesses in these areas. **Minor positive effects** are therefore predicted for A3 and A4.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 involve no growth in the 'other settlements' and so **neutral effects** are predicted.

Options B3 and B4 propose a similar level of growth to other settlements as option A3 discussed above, therefore both positive and negative effects are predicted (minor).

### Scenario C (Discussion of options for delivering a standalone large settlement)

Options C1 proposes a very low level of growth across the other settlements, and therefore effects are predicted to be **neutral** with regards to the local economies in these areas.

## Small Villages and Hamlets

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 do not propose growth in the small villages and hamlets, and therefore effects are likely to be **neutral** with regards to the economy.

Option A4 which disperses growth to include small villages and hamlets could have some benefits for a limited number of businesses that are located in these areas. However, the magnitude of effects would be very minor given that these settlements have no more than one local facility, and these are mostly not employment generating (i.e. community facilities and recreation / leisure). Presuming a fairly proportionate split between the settlements, it is not likely that there would be any notable effect in any particular settlement with regards to the economy. Furthermore, growth would draw housing away from areas with better access to jobs. This is negative, but the scale of effects is so low that they are considered to be neutral. Overall, a **neutral effect** is predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve no growth in the small villages and hamlets and therefore **neutral effects** are predicted (as per options A1, A2, A3, A5, A6).

Option B4 proposes almost double the amount of growth to smaller settlements, but even at this scale, it is unlikely to support new business opportunities, and there are limited existing opportunities to build upon. **Neutral effects** are therefore still predicted with regards to opportunities. At this scale of growth, a greater amount is drawn away from more accessible locations for jobs, which is a **minor negative effect**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets so **neutral effects** are predicted for C1.

## New / expanded settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, and option A4 do not propose growth at other settlements, and therefore effects are predicted to be **neutral**.

Option A5 and A6 (3,000 dwellings) would deliver a substantial amount of growth to new settlements. The location of these new settlements is varied. At Thurstaston and Barkby, there are close links to the City, whilst at Cotes and Wymeswold / Hoton, the sites are more detached from urban centres, but should provide access to jobs in Loughborough (though probably by car). Growth would support accommodation for workers, though not all locations are ideal in terms of access to jobs. Nevertheless, positive effects would be generated. The effects on existing settlements would be more limited, as growth would create new settlements / local centres in their own right. Therefore, the effects for existing communities would be limited.

Should strategic infrastructure and public transport links be improved as part of development at Thurstaston and Barkby settlements, this could potentially benefit deprived communities in the City by providing an increased

## Local economy

range of accommodation.

Overall, **minor positive effects** are predicted. Whilst the new settlements would provide accommodation for the working age population, the benefits for existing communities would be limited, and the location of some new settlements is not ideally related to jobs (without access to a car).

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 do not propose growth at new/expanded settlements, and therefore effects are **neutral**.

Option B6 proposes the same level of growth as options A5 and A6; therefore **minor positive effects** could also be predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 will contribute benefits to the economy with regards to the design and construction of a large new settlement. New homes would also support the local labour pool required for economic growth, which is beneficial to the local economy. At the scale of growth involved, it is likely a new district centre would be required, which would support a small number of local jobs. It is unknown whether employment land would be a part of a new settlement, but this would make sense if such a development is to support sustainable patterns of development. At this scale of growth, it may also be necessary to provide infrastructure improvements, which could (depending on location) help to improve transport links, and attract inward investment. Whilst positive effects are likely, it is unclear the extent to which these would be significant, and which areas would benefit most. Therefore, only **minor positive effects** are predicted at this stage.

### **Overall effects**

Option A1 focuses growth around the PUA and Loughborough / Shepshed, which are key areas of economic activity in the Borough. This should locate housing in areas with good access to employment and allow continued economic growth in key locations. The scale of growth at Loughborough and Shepshed could also help to strengthen links between these two areas. **Significant positive effects** are generated overall despite there being neutral effects in other areas of the Borough.

Option A2 would not generate significant negative effects at Loughborough, but would have some benefits here and also at the Service Centres. The positive effects at the PUA would also be significant. On balance, the effects generated across the Borough ought to be **significant positive effects**.

Option A3 is similar to option A2 in terms of growth around the PUA, Loughborough/Shepshed and service centres, but would include some growth around other settlements. Similar positive effects are predicted compared to option A2, but at the other settlements, there could be some minor benefits in terms of support for these economies. There could also be slight negatives due to increased commuting though. Overall, the effects are still predicted to be **significant**.

Option A4 proposes proportionate throughout Charnwood, but does not propose growth at new settlements. The opportunity to support economic growth in each location is more limited due to growth being more dispersed. This approach also does not make the most of the opportunities to provide housing at the PUA (which would support access to jobs in the City and could possibly help tackle deprivation). Therefore, **minor positive effects** are predicted overall.

Options A5 and A6 direct a substantial proportion of the total growth to new settlements, which reduces the potential for positive effects at Loughborough and the service centres. No significant positive effects are predicted in any particular settlement, or as a result of the total quantum of development. Consequently, a **minor positive effect** is predicted overall for both options.

Each of the options at the higher level of growth (Scenario B) would lead to a greater amount of housing in Loughborough / Shepshed and the Service Centres, which is more likely to support economic growth in these accessible locations. Increase growth overall is also likely to support an increase in construction jobs, increased local spending and contributions to infrastructure improvements. However, a higher level of growth could increase competition for local jobs if there is increased in-migration, and could also put pressure on transport networks, which are potentially negative effects at Loughborough for options B2, B3, B4 and B6.

Overall, Option B2 is predicted to have significant positive effects, reflecting the benefits that ought to be generated at the key employment locations of Loughborough, close to the PUA and at the Service Centres. Though there are some potentially minor negative effects at Loughborough/Shepshed, the overall effects should still be positive given the increased likelihood of new homes being built-out in the plan period.

## Local economy

Likewise, Option B3 is predicted to have **significant positive effects**, with the overall effects across the borough quite similar to Option B2.

Option B4 proposes proportionate growth, which means that opportunities at the PUA are less likely to generate significant effects. Instead, minor benefits would be generated at other settlements. However, a minor negative effect could also be generated as a result of growth in these areas. Overall, a **significant positive effect** is still predicted, as there would still be substantial growth at Loughborough / Shepshed and the Service Centres. However, a **minor negative effect** is also predicted to account for those recorded at the other settlements and potentially at Loughborough / Shepshed.

Option B6 is similar to option B2, although slightly less growth is directed to Loughborough and Shepshed along with service centres, and instead is distributed to new settlements. Whilst this reduces the significance of the positive effects at the service centres, it generates positive effects at the new settlements, which could also benefit areas that they are related to such as the PUA (Thurcaston, Birstall, Syston). Consequently, a **significant positive effect** is still predicted overall.

Option C1 is predicted to have a minor positive effect overall. This relates entirely to the benefits that a large scale new settlement could have in terms of job creation for construction, the delivery of new facilities and services, and potential improvements to infrastructure. Direct benefits to existing settlements would likely be limited (with the exception of jobs creation during construction), and it is uncertain whether employment land would be involved as part of a new settlement. Consequently, there are considerable uncertainties associated with this approach at this stage.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	++	++	0	0	0	++
A2: Urban focus	+	+	++	0	0	0	++
A3: Settlement Hierarchy	+	+	++	+	-	0	++
A4: Proportionate growth	+	+	0	+	-	0	+
A5: Urban intensification and new settlement	0	+?	++	0	0	+	+
A6: Urban focus and new settlement	0	+?	++	0	0	+	+
<b>Scenario B – 15,700 homes</b>							
B2: Urban focus	++	++	-?	++	0	0	++
B3: Settlement Hierarchy	++	++	-?	++	0	0	++
B4: Proportionate growth	++	++	-?	+	+	-	++ -
B6: Urban focus and new settlement	+	++	-?	++	0	0	++
<b>Scenario C - Standalone new settlement</b>							
C1: Large scale new settlement	0	0	0	0	0	+?	+?

## Accessibility

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1 and A5 involve no growth at the service centres, and so the effects in terms of traffic would be neutral. However, there would be fewer opportunities to support improvements to existing facilities, and a missed opportunity to locate development in accessible locations. A **neutral effect** is predicted.

Option A6 distributes a relatively small amount of growth to the service centres, which is unlikely to create significant amounts of traffic. The new homes are likely to have good access to services and facilities though and could help to support small improvements to community infrastructure. At this level of growth, the critical mass required to support new health and education facilities may not be generated, so effects on such services would be less likely to be positive. On balance, **neutral effects** are predicted.

Option A3 distributes double the amount of growth towards the service centres compared to option A6. At this level of growth, there would be increased pressure on existing services and facilities. However, higher levels of development contributions could also better help to support new facilities for new and existing communities. On balance a **minor positive effect** is predicted.

Options A2 and A4 (to a greater extent) would involve the greatest amount of growth at the service centres. This would ensure that a substantial proportion of new development is located in accessible settlements. There should also be better opportunities to secure improvements to community infrastructure, and to support new or expanded health and education facilities. A **minor positive effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 all involve substantially more growth in the Service Centres compared to the options under scenario A. This could lead to increased pressure in terms of traffic and congestion. However, access to services ought to be relatively good for new development (though the necessity for a higher level of growth could mean that the more distant sites at the urban fringes may be developed).

Growth at this level could provide the critical mass for new local facilities, particularly at larger sites. This should have benefits for existing and new communities and generate **significant positive effects**. The likelihood of this occurring is uncertain though as it would depend upon the distribution of development between the Service Centres and site locations.

Option B4 would involve similar growth to options A2 and A4, and therefore **minor positive effects** are predicted.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves limited growth at the service centres, and so the effects in terms of traffic would be neutral. However, there would be fewer opportunities to support improvements to existing facilities, and a missed opportunity to locate development in accessible locations. A **neutral effect** is predicted.

### Loughborough / Shepshed

#### Scenario A (Discussion of options for delivering 8,100 homes)

Both Loughborough and Shepshed possess a wide range of local facilities and services, including good public transport links. Access to jobs would also be good given the opportunities in Loughborough itself and links to Leicester and Derby via train. Development in the urban area would therefore have excellent accessibility. Growth at the urban fringes would be less well connected with regards to existing local services, but would be likely to have good public transport access. The scale of some sites at the urban fringe could also be more likely to support on-site facilities that could benefit new and existing communities.

For option A1, which involves the greatest amount of growth under this scenario, **minor positive effects** are predicted. This reflects the benefits of growth in the urban centre, and some growth at the urban fringes. The effects are not predicted to be significant, as it is uncertain which sites would be involved and whether the critical mass would be created for new facilities in certain locations.

Options A2 and A4 involve lower levels of growth, but would still place development in accessible locations. The requirement for development at the urban fringe would be lower, and so new facilities may be less necessary. Overall, **minor positive effects** are predicted.

## Accessibility

Options A3 and A5 involve lower levels of growth still, and could mostly be accommodated in the urban area. **Minor positive effects** are predicted.

Option A6 involves the lowest level of growth and is therefore unlikely to have notable effects on accessibility. **Neutral effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

All four options involve substantial growth at Loughborough / Shepshed. Each would require the release of urban fringe sites, with option B2 perhaps requiring all available sites. This level of growth ought to support new facilities, which should benefit new and existing communities. However, it is uncertain at this stage where these would be and the extent of positive effects. Increased growth at the urban fringes would also be more likely to support enhancements / expansions to public transport routes, which would help these areas access the town centres better. However, the scale of growth could also impact upon traffic and congestion, which could offset some of these positives. Overall, **minor positive effects** are predicted. Whilst there is potential for significant positive effects, it is uncertain at this stage if or where they would be generated.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves limited growth at Loughborough, and so the effects in terms of localised traffic would be neutral. However, there would be fewer opportunities to support improvements to existing facilities, and a missed opportunity to locate development in accessible locations. A **neutral effect** is predicted.

## PUA:

### Scenario A1 (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 all involve the same level of growth at the PUA, which it is assumed would be distributed across areas such as Syston, Birstall and Thurmaston. These areas have broadly good access to services and facilities with a GP in Syston and two GPs in both Birstall and Thurmaston. There are also multiple primary schools in the area and three secondary schools. Public transport access is reasonable, with links to the City helping to reduce the distance needed to access jobs and a wide range of cultural and recreational facilities. Though this level of growth could impact upon traffic, new and existing residents should still benefit from good accessibility; with potential improvements being achieved through developer contributions. Consequently, a **minor positive effect** is predicted.

Option A4 would involve a smaller amount of development, and so whilst new development would still be well located, the opportunity to enhance facilities would be lower. Therefore, an **uncertain minor positive effect** is predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 would have significant positive effects, as the level of growth is the same as for options, A1, A2, A3, A5 and A6.

Option B4 would involve a smaller amount of development, and so whilst new development would still be well located, the opportunity to enhance facilities would be lower. Therefore, only a **minor positive effect** is predicted.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves limited growth at the service centres, and so the effects in terms of traffic would be neutral. However, there would be fewer opportunities to support improvements to existing facilities, and a missed opportunity to locate development in broadly accessible locations. A **neutral effect** is predicted.

## Other settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A5 and A6 do not involve any growth at the smaller settlements, which is a **neutral effect** in terms of accessibility in these areas. However, a lack of growth in these areas would not help to support improvements to rural accessibility (which might otherwise benefit from developer contributions).

Options A3 and A4 involve growth at other settlements and hamlets (option A4 only).

## Accessibility

Many of these settlements do not have as wide a range of local facilities, and therefore, accessibility is likely to be poorer for residents in these communities. The amount of development involved is unlikely to create a critical mass to support new facilities, but may have some minor beneficial effects on community infrastructure. Overall, a **minor negative effect** is predicted for both scenarios.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B1 and B4 do not involve growth at the other settlements and so **neutral effects** are predicted. Option B2 involves similar growth to options A3 and A4 and thus a **minor negative effect** is predicted. Option B3 involves slightly higher growth than all other options at the other settlements, and so more development would be located in areas with poorer accessibility. However, the higher level of growth could better support new facilities in rural areas (though not to the extent that new facilities would be created). This offsets the negative effects somewhat, and so a **minor negative effect** is still predicted overall.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves limited growth at the smaller settlements, which is a **neutral effect** in terms of accessibility in these areas. However, a lack of growth in these areas would not help to support improvements to rural accessibility (which might otherwise benefit from developer contributions).

## Small Villages and Hamlets

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 do not propose growth in the small villages and hamlets, and therefore effects are likely to be **neutral** with regards to accessibility.

Option A4 involves a small amount of growth at small villages and hamlets. These settlements all have poor access to a wide range of local facilities, and therefore, accessibility is likely to be much poorer for residents in these communities. The amount of development involved would not create a critical mass to support new facilities, and is unlikely to have any positive effect. With regards to travel, car trips are more likely to be generated given the inability to walk to local services, and the poorer public transport links. Whilst this is negative, it is unlikely to be significant with regards to traffic and congestion given the dispersed nature of development. Overall **neutral effects** are predicted.

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve no growth in the small villages and hamlets and therefore **neutral effects** are predicted (as per options A1, A2, A3, A5, A6).

Option B4 proposes almost double the amount of growth to smaller settlements compared to A4, but even at this scale, it is unlikely to support new facilities. At this scale of growth, a greater amount of housing is drawn away from more accessible locations for facilities and jobs, which is recorded as a **minor negative effect**.

### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the small villages and hamlets so **neutral effects** are predicted for C1.

## New / expanded settlements:

### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1-A4 do not involve growth at new settlements, and so **neutral effects** are predicted.

Options A5 and A6 both involve growth at new settlements. These areas currently have poor or no access to services and facilities. Therefore, unless the new settlements generate the critical mass to support new schools and health facilities, these communities will need to travel to access basic services. Access to cultural and community facilities in these locations would also be dependent upon developer contributions.

The level of growth involved ought to support new primary facilities, but it is unlikely new secondary schools would be supported. Likewise, satellite health facilities could be supported, but the likelihood of large new health facilities would be uncertain.

Access to public transport would also be dependent on new or amended services being secured. Given the potential for a large amount of growth to be located in areas of relatively poor accessibility, and the uncertainty of new facilities being secured, an **uncertain negative effect** is predicted at this stage.

## Accessibility

### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B4 are predicted to have **neutral effects** as they involve no growth at new settlements.

Option B6 is predicted to have an **uncertain negative effect**, as it involves the same level of growth as options A5 and A6 above.

### Scenario C (Discussion of options for delivering a standalone large settlement)

Option C1 involves substantial growth at a large new settlement. Though the precise location is unknown, the opportunity areas broadly will have poor or no access to services and facilities. Therefore, unless the new settlements generate the critical mass to support new schools and health facilities, these communities will need to travel to access basic services. Access to cultural and community facilities in these locations would also be dependent upon developer contributions.

The level of growth involved ought to support new primary facilities and a new secondary school, which would benefit the new communities. The potential for new health facilities would also be higher than for a series of smaller new settlements (as per A5 / A6 / B6). This ought to reduce the need to travel to reach such facilities.

Access to public transport would also be dependent on new or amended services being secured. At the scale of growth involved it is likely that services would be viable, though this may be more difficult in a more isolated location.

Overall, accessibility to local basic services, a district centre, public transport and recreation ought to be good. However, it is likely that car travel would be increased, especially if a new settlement is located in the open countryside. For this reasons, a minor positive effect is predicted (rather than significant positive effects).

### **Overall effects**

Option A1 is predicted to have a **minor positive effect** overall. Development would be focused on the most accessible locations, and would not be likely to create negative effects in any areas.

Option A2 is predicted to have minor positive effects overall. There would be positive effects in the Service Centres, Loughborough / Shepshed and the PUA, but none are predicted to be significant.

Option A3 is predicted to have minor positive effects overall. Though accessibility of some new development would be poor, the effects ought to be offset by the positive effects generated across other areas within the Borough.

Option A4 is predicted to have a minor positive effect, though it would be less likely to generate benefits at the PUA compared to all other options.

Option A5 would generate positive effects in the main, as large amounts of growth are directed to Loughborough and the PUA. However, there are potential negative effects at new settlements which could offset these positive effects somewhat. Therefore, an **uncertain minor positive effect** is predicted overall.

Option A6 is predicted to have **neutral effects**. Though much of the development would be located in areas with fairly good accessibility, it would be at a level that does not generate benefits in terms of new community facilities and infrastructure. Though positive effects are identified at the PUA, there are potential negatives associated with new settlements.

Options B2 and B3 are predicted to have **significant positive effects** overall. Growth would be located in areas with good accessibility, and at the higher levels of growth involved, this could create a critical mass to support new onsite facilities in some areas which would benefit new and existing services. In the service centres this is predicted to be significantly positive, but not at Loughborough, where new development at the urban fringe could still be quite distant to the town centre despite local facilities potentially being created. Though the increased level of growth overall could increase traffic and congestion, accessibility to services should still remain good.

Option B4 is predicted to have a **minor positive effect** overall. The benefits generated across the Borough would be mostly minor positives, though growth at other settlements would offset this somewhat.

Option B6 is predicted to have a **significant positive effect** overall. This is related to the positive effects that would be generated across the Borough at the service centres, Loughborough / Shepshed and the PUA. Though there are uncertain negative effects at the new settlements, these do not outweigh the cumulative positive effects that should be generated in accessible locations.

## Accessibility

Option C1 is predicted to have a mostly neutral effect with regards to accessibility for most of the borough as there is little growth in existing settlements.

Whilst accessibility at a new settlement ought to be good for new communities, there may still be a reliance on car travel to access jobs and retail. Overall, **neutral effects** are predicted as the overall effect on the Borough's patterns of travel would be minimal.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A – 8,100 homes</b>							
A1: Urban intensification	0	+	+	0	0	0	+
A2: Urban focus	+	+	+	0	0	0	+
A3: Settlement Hierarchy	+	+	+	-	0	0	+
A4: Proportionate growth	+	+	+ <sup>?</sup>	-	0	0	+
A5: Urban intensification and new settlement	0	+	+	0	0	- <sup>?</sup>	+ <sup>?</sup>
A6: Urban focus and new settlement	0	0	+	0	0	- <sup>?</sup>	0
<b>Scenario B – 15,700 homes</b>							
B2: Urban focus	++	+	+	0	0	0	++
B3: Settlement Hierarchy	++	+	+	0	0	0	++
B4: Proportionate growth	+	+	+	-	-	0	+
B6: Urban focus and new settlement	++	+	+	0	0	- <sup>?</sup>	++
<b>Scenario C - Standalone new settlement</b>							
C1: Large scale new settlement	0	0	0	0	0	+	0

## Minerals

### Service centres:

#### Scenario A (Discussion of options for delivering 8,100 homes)

The potential for mineral resources to be sterilised by development varies at each of the service centres, as outlined below.

*Anstey* – A total of 5ha of development land falls within an igneous rock safeguarded area. It is likely this could be avoided under each spatial option due to the flexibility in site choice.

*Barrow upon Soar* – A total of 25ha of gypsum rock, 17ha of sand and gravel, and 2.6 ha of igneous rock overlaps with development site options. However, not all of these site options would be required under any of the spatial options. It ought to be possible to avoid loss for option A6 (the lowest level of growth). However, a loss of 4 ha of sand and gravel and/or Gypsum could occur for option A3. For option A4, a loss of 9ha could occur, with up to 7ha for option A2.

*Quorn* – Small areas of sand and gravel (less than 2 ha) and Gypsum (less than 2ha) could be affected by development. However, it is unlikely that minerals extraction would be feasible on the sites involved, and the loss would be very small for any of the spatial options.

*Sileby* – There are a range of site options overlapping with minerals safeguarding zones. Approximately 13ha fall within Gypsum safeguarded areas, 33ha within sand and gravel, and 2 ha of igneous rock. However, not all of these site options would be required under any of the spatial options. There are also site options not falling into minerals safeguarded areas. At lower levels of growth (option A6) it is possible that sites in the urban area could accommodate development needs. For flexibility, greenfield sites may be required though, so potentially 3ha of land could be lost. At double the amount of growth (option A3) the potential for a 67ha overlap could occur. Option A4 could lead to a loss of 12 ha, whilst option A2 could lead to a loss of up to 10ha.

*Rothley* - There are a range of site options overlapping with minerals safeguarding zones. Approximately 36ha fall within safeguarded areas for sand and gravel and 3ha fall within igneous rock areas. However, not all of these site options would be required under any of the spatial options. For option A6, approximately 5 ha could be affected, with up to 14ha for the highest growth under option A4. Option A3 could affect approximately 10ha, and option A2 up to 8ha.

*Mountsorrel* – No minerals safeguarded areas would be affected.

As there is no growth proposed at the service centres for options A1 and A5, a **neutral effect** is predicted for both.

Option A6 would have the lowest amount of growth (for the options involving some growth) and would overlap with less resources (up to 8 ha of sand and gravel). This is considered to be a **neutral effect** due to the low magnitude of the effects.

Option A3 could overlap with more areas of minerals safeguarding compared to A6 (almost double), which would increase the potential for sterilisation. A total of up to 21ha (mainly sand and gravel) could potentially be lost. However, it ought to be possible to avoid safeguarded areas easier than for options A2 and A4. Therefore, a **neutral effect** is predicted for option A3.

Option A2 would overlap with even more areas of minerals safeguarding than option A3, with up to 25ha potentially being affected (mostly sand and gravel). This is predicted to be **neutral effect**, given the extent of resources that would remain throughout the borough.

Option A4 is likely to have the most prominent effects, as it involves the greatest amount of growth at the service centres. Though minerals safeguarded zones would be avoided at some settlements, there could be sterilisation of resources at others. Sand and Gravel is likely to be most affected, with a total of approximately 35 ha potentially affected. This is predicted to be **neutral effect**, given the extent of resources that would remain throughout the borough.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3, B4 and B6 would all involve greater levels of growth in the service centres than the corresponding options Under scenario A.

For option B2, there would be double the growth compared to option A2. This would require greater release of land at each service centre. The implications of this would be up to an additional 30ha of overlap with safeguarded minerals (60ha in total). This is an **uncertain negative effect**, as it may still be possible to avoid some areas, and viable working of minerals might not be possible anyway.

Options B3 and B4 would involve further growth still, with potential overall overlap with minerals safeguarded areas of 70ha in total For B4. **Minor negative effects** are predicted, as the flexibility in site choice would reduce further. Option B6 would involve similar levels of growth to option A4, and thus the same **neutral effects** are

## Minerals

predicted (35ha overlap).

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the service centres with regards to minerals. At the scale of growth involved, it would be possible (and very likely) to avoid overlap with minerals safeguarded areas.

### **Loughborough / Shepshed**

#### Scenario A (Discussion of options for delivering 8,100 homes)

To the south east of Loughborough, several site options fall within sand and gravel minerals safeguarding areas (with a total of approximately 90ha involved). Development here could therefore potentially sterilise these resources. Similarly, development in Shepshed could potentially involve the loss of sand and gravel resources, with approximately 80ha of potential development land falling within safeguarded zones. There are also site options within Shepshed overlapping with clay resources (20 ha) and igneous rock (10 ha).

It is more likely that negative effects would occur for option A1, where the flexibility in site choice would be lower. For this growth option, it is possible that approximately 104ha of sand and gravel resources could be affected, as well as clay resources and igneous rock. This is predicted to be a **minor negative effect**. The effects are not considered to be significant, as a substantial area of (sand and gravel resources would remain and the loss of clay and igneous rock would be low. The location of development sites close to the urban fringe may also not be suitable for minerals extraction anyway.

Option A4 involves the next highest level of growth, with the potential of up to 65ha being affected. This is predicted to be an **uncertain negative effect**, as it ought to be easier to avoid safeguarded areas compared to option A1.

For options A2, A3, and A5, the overlap with minerals safeguarded zones would be much lower, with approximately 43ha of sand and gravel potentially affected for option A2, up to 22ha for option A3 and 6ha for option A5. Clay and igneous rock would be less likely to be affected too. A **neutral effect** is predicted for options A2, A3 and A5.

For option A6, the potential overlap with minerals zones would be lowest of any option, and could potentially be avoided altogether, thus a **neutral effect** is predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B3, B4 and B6 require double the amount of growth compared to option A4. At this level of growth a further 115ha of land could potentially be affected, due to the need to utilise a greater number of sites overlapping with minerals areas. This could be total of approximately 180ha, which is a **minor negative effect**. The level of growth would be higher still for Option B2 and would therefore be likely to include the majority of areas of minerals safeguarding in the area (192ha). This is a **minor negative effect**.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for Loughborough / Shepshed with regards to minerals. At the scale of growth involved, it would be possible (and very likely) to avoid overlap with minerals safeguarded areas.

## PUA

#### Scenario A (Discussion of options for delivering 8,100 homes)

The majority of site options at the PUA (Thurmaston, Thurstaston and Birstall) are either within the built up urban area, or do not fall within minerals safeguarding zones. Therefore, effects due to development in this location and negligible for options A1-A6.

However, there would also be growth in Syston as part of the PUA (approximately 1550 homes) which could potentially overlap with 56ha of minerals safeguarded areas for options A1, A2, A3, A5 and A6. Though this is possible negative, it is considered a **neutral effect** in the context of the minerals resources across the borough and the likelihood of these locations being suitable for workings.

For option A4, it should be possible to avoid all minerals safeguarded areas.

#### Scenario B (Discussion of options for delivering 15,700 homes)

The higher growth options B2, B3 and B6 involve the same level of housing at the PUA as A1, A2, A3, A5 and A6. The effects are therefore the same. Option B4 involves approximately double the amount of growth

## Minerals

compared to option A4 (both being proportionate growth options). At this level of growth a **neutral effect** is still predicted, as it ought to be possible to avoid minerals safeguarded zones in the main.

### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for the PUA with regards to minerals. At the scale of growth involved, it would be possible (and very likely) to avoid overlap with minerals safeguarded areas.

### **Other settlements:**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Development at some of the 'other settlements' could potentially overlap with minerals safeguarding zones, whilst at others, effects would be neutral. For example, there would be no overlap at Hathern, Wymeswold or East Goscote. In other areas, there would be an overlap with areas of sand and gravel resources (Queniborough, Rearsby and Barkby for example), but the total potential loss of resources would be minor (less than 20ha in total). With regards to other minerals, site options surrounding Burton upon the Wolds overlap with Gypsum safeguarded areas. However, there are sufficient alternative sites to deliver proposed levels of growth. Overall, a **neutral effect** is predicted for option A3. For option A4, the effects at the other settlements would be lower, but there could be some overlap with minerals safeguarded zones at smaller settlements such as Newton Linfield (Igneous Rock), Seagrave (Gypsum). The effects would be negligible though as the scale of growth is very low (up to 20ha).

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2 and B6 do not involve any growth, and so neutral effects are predicted. Option B3 involves slightly lower levels of growth compared to option A3 (both options being driven by the settlement hierarchy). This would perhaps lead to a slightly lower magnitude of effect (5ha less). A **neutral effect** is still predicted. For option B4, the amount of growth in the other settlements and hamlets would be double that of option A4 (both options being proportionate approaches). This would lead to a greater potential for effects, with perhaps up to 40ha of minerals safeguarded areas overlapped. The magnitude of effects is still low so a **neutral effect** is predicted for option B4 also.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

**Neutral effects** are predicted for other settlements with regards to minerals. At the scale of growth involved, it would be possible (and very likely) to avoid overlap with minerals safeguarded areas.

### **Small Villages and Hamlets**

#### Scenario A (Discussion of options for delivering 8,100 homes)

Options A1, A2, A3, A5 and A6 do not propose growth in the small villages and hamlets, and therefore effects are likely to be **neutral** with regards to the economy.

Option A4 which disperses growth to include small villages and hamlets could involve growth in areas that overlap with minerals safeguarded areas (Gypsum, Igneous rock, sand and gravel), but this would be a very small amount (under 7ha) and unlikely to be appropriate to undertake minerals extraction immediately adjacent to small settlements. Therefore, **neutral effects** are predicted.

#### Scenario B (Discussion of options for delivering 15,700 homes)

Options B2, B3 and B6 involve no growth in the small villages and hamlets and therefore **neutral effects** are predicted (as per options A1, A2, A3, A5, A6).

Option B4 proposes almost double the amount of growth to smaller settlements compared to A4, but even at this scale, it is unlikely that more than 15ha of land would be overlapped. Therefore, **neutral effects** are still predicted at a higher scale of growth.

#### Scenario C (Discussion of options for delivering a standalone large settlement)

This option does not involve growth at the hamlets so **neutral effects** are predicted for C1.

## Minerals

### New / expanded settlements:

#### Scenario A (Discussion of options for delivering 8,100 homes)

The new settlement at Barkby is partly overlapped by sand and minerals safeguarded zone, but this part of the site would likely be unsuitable for feasible minerals workings. Therefore, effects are likely to be neutral.

The new settlement at Wymeswold / Hoton falls within approximately 35ha of Gypsum minerals safeguarded area. However, much of this falls below built up area (former airfield), and is therefore unlikely to be a suitable site for minerals extraction. Therefore, effects are likely to be neutral.

The new settlement at Cotes overlaps with approximately 110 ha of sand and gravel mineral safeguarded zone.

The new settlement at Thurstaston does not overlap with any minerals safeguarded zones. Therefore, effects are neutral.

Options A5 and A6 could lead to the potential sterilisation of up to 110ha of sand and gravel resources. This is considered to be a **minor negative effect** in the context of total mineral resources. There is also uncertainty whether the minerals here would be workable in any case.

#### Scenario B (Discussion of options for delivering 15,700 homes)

The only option involving growth at a new settlement is option B6. This is at the same scale as for options A5 and A6, which also involve a new settlement. Therefore the effects are the same (a **minor negative effect**).

#### Scenario C (Discussion of options for delivering a standalone large settlement)

A large new settlement could involve overlap with 290 – 360ha of Clay Minerals Safeguarding Area to the east of the borough in the open countryside. Resources may be suitable for extraction, and so sterilisation would be likely if growth occurred here. This would constitute a minor negative effect on a borough scale. However, should the settlement be located to the north east of the PUA, there would be neutral effects as there would be limited overlap with mineral resources in this area. Should a large scale settlement be brought forward to the West of Shepshed, there would be probable overlap with up to 75ha of sand and gravel Minerals Safeguarded areas too. Whilst the extent of effects would be lower compared to a settlement located to the west of the Borough, there would still be potential for minor negative effects. Consequently, an **uncertain negative effect** is predicted at this stage, reflecting the possible overlap with mineral resources in two of the three broad locations that a new settlement could be located within.

### Overall effects

Each of the options could lead to the sterilisation of mineral resources due to housing development. This would mostly be sand and gravel resources, which form the largest mineral resource that overlap with site options within the Borough. The loss involved at individual settlements would be unlikely to be significant in the main, as the magnitude of effects would be low, and the potential for resource extraction may also be low. In combination, the potential sterilisation of minerals across the borough amounts to more prominent effects for some options though (as discussed below).

Option A1 could lead to the sterilisation of up to 160 ha of mineral resources. The majority would be at Shepshed and Loughborough and Syston and would be likely to be sand and gravel resources (though there could also be igneous rock and clay resources affected at Shepshed). However, the nature of some sites involved could mean that mineral extraction was not feasible anyway. Therefore, any 'real' loss of workable minerals would be likely to be lower than 160ha. With this in mind, and in the context of the total resources present across the district, the negative effects are not predicted to be significant overall.

Option A2 could lead to the sterilisation of up to 124 ha of mineral resources, with the majority likely to be sand and gravel. This would consist of land at Shepshed, Loughborough, Syston and several service centres. However, the nature of some smaller sites involved could mean that mineral extraction was not feasible anyway. Therefore, any 'real' loss of workable minerals would be likely to be lower than 124 ha. With this in mind, and in the context of the total resources present across the district, the negative effects are not predicted to be significant overall.

For option A3 a total of up to 119ha of mineral resources could be affected, spread across Syston, Loughborough / Shepshed and other settlements. The majority of resources affected would be sand and gravel and much smaller amounts of Gypsum and Igneous rock. The likelihood of all these areas being workable for minerals extraction is low though, so the net 'loss' of resources is likely to be insignificant. Overall, this constitutes an uncertain (minor) negative effect.

For option A4 a total of up to 120ha of mineral resources could be affected, spread across Syston, Loughborough / Shepshed, other settlements and small villages and hamlets. The majority of resources affected would be sand

## Minerals

and gravel and much smaller amounts of Gypsum and Igneous rock. The likelihood of all these areas being workable for minerals extraction is low though, so the net 'loss' of resources is likely to be insignificant. Overall, this constitutes an uncertain (minor) negative effect.

For options A5 and A6, the potential loss of mineral resources would be greatest at new settlements (Cotes). In combination with potential effects at Loughborough and Syston, option A5 could overlap with 172ha of mineral safeguarded areas, whilst option A6, which involves more growth in the service centres and less in Loughborough, could involve up to 174ha. These two options perform the least well in terms of minerals protection. However, the effects are still not considered to be significant in the context of overall resources, and the likely feasibility of working some of these sites.

Option B2 would involve a total loss of mineral resources of up to 308 ha. The majority would be at Loughborough / Shepshed, with a range of different minerals potentially affected.

Option B3 would involve a potential loss of mineral resources of up to 321 ha and option B4 - 290ha with the majority being overlapped in Loughborough and the service centres for both.

Whilst the effects of options B2, B3 and B4 would undoubtedly be more negative than options under scenario A, the effects are still not predicted to be significant, given the total amount of mineral resources available.

Option B6 would involve the potential loss of minerals resources of up to 346ha with large overlaps in Loughborough / Shepshed and at new settlements. Given the increased magnitude of effects, and the inability to avoid minerals safeguarded areas in Loughborough / Shepshed, this is considered to be a **minor negative effect**.

Option C1 would in all likelihood involve a limited overlap with minerals safeguarded areas at the Service Centres, Loughborough / Shepshed, the PUA and other settlements.

It ought to be possible to avoid sterilisation in these areas.

However, depending upon location, a large new settlement could involve overlap with 290 – 360ha of Clay Minerals Safeguarding Area. The location of these resources (to the east of the borough) may also be suitable for extraction, and so sterilisation would be likely if growth occurred here. This would constitute a minor negative effect on a borough scale. However, should the settlement be located to the north east of the PUA, there would be neutral effects. Consequently, an **uncertain negative effect** is predicted at this stage.

	Service centres	Loughborough	PUA	Others	Hamlets	New settlements	Overall effects
<b>Scenario A - 8100</b>							
A1: Urban intensification	0	-	0	0	0	0	-
A2: Urban focus	0	0	0	0	0	0	-
A3: Settlement Hierarchy	0	0	0	0	0	0	-
A4: Proportionate growth	0	-?	0	0	0	0	-
A5: Urban intensification and new settlement	0	0	0	0	0	-	-
A6: Urban focus and new settlement	0	0	0	0	0	-	-
<b>Scenario B – 15,700</b>							
B2: Urban focus	-?	-	0	0	0	0	-
B3: Settlement Hierarchy	-	-	0	0	0	0	-
B4: Proportionate growth	-	-	0	0	0	0	-
B6: Urban focus and new settlement	0	-	0	0	0	-	-
<b>Scenario C - Standalone new settlement</b>							
C1: Large scale new settlement	0	0	0	0	0	-?	-?

## APPENDIX D: APPRAISAL OF EMPLOYMENT ALTERNATIVES

This appendix sets out an appraisal of the three employment options which are introduced and described in Section 5 of the Interim SA Report. These are as follows:

1. Rely on existing employment allocations identified in the Core Strategy and 2004 Borough of Charnwood Local Plan.
2. Identify new employment land to facilitate regeneration and release poorer quality employment sites for alternative uses.
3. Identify new employment land to respond to demand for large warehousing.

The methods used to identify significance are the same as those outlined in Appendix C, which dealt with housing options. In summary each employment option has been appraised as follows:

- The SA Objectives / framework forms the basis for appraising each option.
- A table is prepared for each SA Objective which sets out a discussion of the effects for each option based upon an assessment of significance.
- To determine significance reference is made to the SEA Directive factors such as the *nature, magnitude, timescale, likelihood, permanence and scale of effects*.
- As well as a discussion of the effects an overall 'effects symbol' is provided for each option to indicate significance.

The following tables have been used to visualise the nature of effects for each option against each SA Objective. Where there is uncertainty, the nature of such effects has been identified. For example, an uncertain negative effect would be recorded if there is a chance that negative effects could occur but this is dependent upon unknown factors. It may still be possible to rule out significant effects though, and so the unknown effect may be minor or potentially significant.

Effects Significance	Effects symbol
<i>Significant positive effects</i>	++
<i>Minor positive effects</i>	+
<i>Neutral effects</i>	0
<i>Minor negative effect</i>	-
<i>Significant negative effect</i>	--

Uncertain effects	Effects symbol
<i>Uncertain significant positive effect</i>	++ <sup>?</sup>
<i>Uncertain minor positive effect</i>	+ <sup>?</sup>
<i>Uncertain effects</i>	?
<i>Uncertain minor negative effect</i>	- <sup>?</sup>
<i>Uncertain significant positive effect</i>	++ <sup>?</sup>

## Landscape Character

Option 1

0

Option 2

0

Option 3

0

### Appraisal commentary

All of the options propose a similar quantum of employment growth and this is predominantly located in the same areas. A significant proportion of the proposed development is already committed; however, there are some minor differences in the location of some of the non-committed (around 10ha) employment land proposed under Options 2 and 3.

The effects for option 1 are considered to be **neutral** given that much of the growth involved is already committed or tested through previous plan-making processes. Continuation of this strategy is unlikely to have any notable effects with regards to landscape (though an unplanned approach would be more likely to generate negative effects).

Option 2 would result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This 10ha of employment land would be delivered in the south of the borough along the northern fringe of Leicester City. It is important to note that the precise location of sites to deliver this 10ha is unknown at this stage. The Landscape Character Assessment considered the landscape capacity of ten zones to the north of Leicester City. It concluded that the majority of zones in this area have medium to medium/high capacity to accommodate development, with only one zone to the south of Rothley identified as having medium to low capacity.<sup>10</sup> While there is the potential for this option to deliver some of this new employment land on brownfield land this is uncertain at this stage. The nature and significance of effects will depend on the precise location of development; however, it is considered unlikely that it would have a significant negative effect on the landscape given the findings of the Landscape Character Assessment. Consequently a **neutral effect** is predicted.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. The additional site proposed under Option 3 falls within a zone identified through the Landscape Character Assessment as having high capacity to accommodate development due to the areas weak landscape characteristics, parts of which are in poor condition.<sup>11</sup> Option 3 is therefore considered unlikely to have a significant effect on landscape and there are no significant differences compared to Options 1 and 2.

In summary, there are no significant differences between the options at a borough scale. There is likely to be differences in terms of localised effects on the landscape as a result of Options 2 and 3 but evidence suggest that there is capacity to accommodate development in these areas, although there is some uncertainty for Option 2 as the precise location of development is not known at this stage. Overall, once mitigation is taken into account there is the potential for a residual **neutral effect** for each option.

<sup>10</sup> Charnwood Borough Council (2012) Borough of Charnwood Landscape Character Assessment.

<sup>11</sup> Ibid.

## Biodiversity

Option 1

0

Option 2

-?

Option 3

-

### Appraisal commentary

As previously stated, all of the options propose a similar quantum of employment growth and this is predominantly located in the same areas. A significant proportion of the proposed development is already committed; however, there are some minor differences in the location of some of the non-committed (around 10ha) employment land proposed under Options 2 and 3.

Though the precise location of development is not defined for option 2, it is unlikely that sites to deliver the 10ha would contain any nationally designated sites for biodiversity. There is flexibility in site choice to allow for locally important habitats to be avoided, but several potential locations for development are adjacent to Watermead Country Park which is a Site of Importance for Nature Conservation. There is therefore a possibility that employment growth associated with this option could have adverse effects on wildlife due to disturbance at construction and operation (for example increased noise, lighting etc.). Given that there are already several committed sites in this location too, the potential for cumulative negative effects exists. An **uncertain (negative) effect** is identified at this stage.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated to the south east of Shepshed, north east of M1 Junction 23. There are no designated sites for biodiversity within or adjacent to the site and it is unlikely that there would be any significant negative effects on biodiversity as a result of development once mitigation is taken into account. However, the Newhurst Quarry SSSI is within 200m of the site. The SSSI risk zones suggest that industrial / warehousing development over 1000sqm could potential have effects that will need to be tested. Given that the total floorspace would likely exceed this, the potential for negative effects exists. A **minor negative effect** is therefore predicted at this stage.

In summary, there are no significant effects likely to be generated for any of the options with regards to biodiversity. However, Option 2 could result in more localised effects on biodiversity to south of the borough through the redistribution of 10ha of employment land but the nature and significance of effects are uncertain as the precise location of development is not known. Option 3 is likely to result in more localised effects on biodiversity to the south east of Shepshed, particularly associated with the Newsome Quarry SSSI. However, with mitigation in place, it is considered unlikely that the effects would be significant.

## Water quality

Option 1

0

Option 2

?

Option 3

?

### Appraisal commentary

There is little to differentiate between the options in terms of potential effects on the water environment. There is the potential for different localised impacts depending on the location of the redistributed 10ha of employment land under Option 2, particularly if sites are located close to waterbodies such as Watermead Country Park. The additional 10ha of employment land under Option 3 is located on land that is intersected by a minor watercourse, which could potentially be affected by development.

However for both options, effects are unlikely to be of significance once mitigation is taken into account, including the integration of SUDs to manage impacts.

Where actively used agricultural land is changed to employment uses, this could have positive effects upon water quality as there may be less run-off of nitrates; however, this is uncertain at this stage.

Overall, it is predicted that Options 1 will have a residual **neutral effect** on this topic, / Options 2 and 3 are also expected to have a neutral effect, but there is a small degree of uncertainty given that the exact location of sites is unknown.

## Flood Risk

Option 1

0

Option 2

0

Option 3

0

### Appraisal commentary

The River Soar flows through the borough and Leicester City so there are areas of high fluvial flood risk to the south of the borough along the fringe of Leicester City (which is of relevance to Option 2). Though some potential development sites are adjacent to areas of high flood risk (or overlapped slightly) it is assumed that areas of high flood risk would be avoided where possible, follow sequential and exception tests and implement suitable mitigation as necessary.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated to the south east of Shepshed, north east of M1 Junction 23. There are small areas of high flood risk (Zone 3) on the site but it is likely that development could avoid these areas or suitable mitigation provided as part of any proposal for development.

Overall, there are no significant differences between the options and it is predicted that they will all have a residual **neutral effect** on flood risk.

## Soil resources

Option 1

0

Option 2

-

Option 3

-

### Appraisal commentary

As previously stated, all of the options propose a similar quantum of employment growth and this is predominantly located in the same areas. A significant proportion of the proposed development is already committed or allocated. Therefore the effects are predicted to be **neutral** for option 1.

There are some minor differences in the location of some of the additional (around 10ha) employment land proposed under Options 2 and 3.

Option 2 would result in the delivery of 10ha of employment land to the north of Leicester City where there are areas of Grade 2, 3 and 4 agricultural land. At this stage the precise location of development is not known so there is uncertainty about the effects. However, the majority of available sites involve some agricultural land, so it is likely that there will be at least 5ha of land affected. Whether this would be grade 2 or 3 is unknown. A **minor negative effect** is predicted.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated to the south east of Shepshed, north east of M1 Junction 23. The site is predominantly made up of Grade 3 agricultural land and at this stage it is not known if this is Grade 3a or 3b. The loss is recorded as negative, but the effects are not significant in the context of the resources present at a borough scale.

In summary, all of the options could potentially result in the loss of best and most versatile agricultural land. However, the majority of this is committed development, and so neutral effects are predicted for Option 1. For option 2, the replacement sites could potentially involve a loss of agricultural land, whereas those low quality sites that are replaced do not. Therefore, a minor negative effect is predicted. As option 3 involves a greater amount of development overall, the effects are slightly more negative compared to option 2. However, there are no significant differences between options 2 and 3 at a borough scale.

## Air quality

Option 1

0

Option 2

-?

Option 3

-

### Appraisal commentary

As previously stated, Option 1 is considered to represent a business as usual approach and so the effects with regards to air quality are predicted to be **neutral**.

Option 2 will result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This 10ha of employment land would be delivered in the south of the borough along the northern fringe of Leicester City. It is important to note that the precise location of sites to deliver this 10ha is unknown at this stage. The delivery of additional employment could increase traffic on the strategic highway network in this area, including the A46, A6 or A406, but the significance of this is uncertain at this stage and dependent on the precise location of development and level of mitigation provided. However, given that the quantum of employment provision in this broad location would remain unchanged compared to Option 1, the effects are also predicted to be neutral. It is unlikely that significant effects would occur (though increased traffic through Syston may be generated dependent upon site selection).

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. This option would be likely to primarily increase traffic, including Heavy Goods Vehicles (HGVs), along the M1 as well as increase pressure on the capacity of Junction 23 and on local connecting roads. Consequently, there may be adverse effects on air quality in this part of the borough. However, the effects are not considered likely to be significant given that the latest monitoring data for NO<sub>2</sub> in close proximity to this site shows that levels of notably below target objectives. Consequently only a **minor negative effect** is predicted.

Overall, there is the potential for differences in terms of localised impacts as a result of Options 2 and 3; however, these are unlikely to be significant once mitigation is taken into account. The effects for Option 2 are more uncertain, whilst a minor negative effect is identified for Option 3.

## Climate change

Option 1

0

Option 2

0

Option 3

0

### Appraisal commentary

As previously stated, all of the options propose a similar quantum of employment growth and this is predominantly located in the same areas. Options 2 and 3 however involve 10ha additional employment land, which is likely to generate increased carbon emissions and require energy to support operations and transportation. The location of development under both options 2 and 3 is likely to lead to increased transportation to access the sites for the workforce and also for operational activities (particularly for option 3 which would be more likely to involve increased numbers of HGVs). From a Borough-wide perspective however, the effects on the baseline position are unlikely to be notable given the scale of growth involved.

None of the options provide any significant additional opportunities to incorporate renewable energy operation over the others. Therefore neutral effects are predicted in this respect.

In summary, there are no significant differences between the options in terms of climate change and none are likely to have a significant effect. The residual effects are predicted to be **neutral**.

## Historic Environment

Option 1

0

Option 2

0

Option 3

0

### Appraisal commentary

Option 1 is predicted to have neutral effects given that the majority of development is committed and / or allocated (with heritage issues likely to have been considered and mitigated satisfactorily if necessary).

Option 2 will result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This 10ha of employment land would be delivered in the south of the borough along the northern fringe of Leicester City. It is important to note that the precise location of sites to deliver this 10ha is unknown at this stage. There is a range of designated heritage assets spread across this area, including Listed Buildings, Scheduled Monuments and a Conservation Area.<sup>12</sup> Given the absence of heritage assets within or immediately adjacent to potential sites for development, it is likely that the employment land could be delivered without significant effects on the historic environment. The nature and significance of effects will ultimately be dependent on the precise location of the employment land and its design/layout.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. There are no designated heritage assets within or adjacent to the site. Taking the evidence into account it is therefore considered unlikely that Option 3 would have a significant effect on the historic environment.

Overall, there are no significant differences between the options at a borough scale. There is the potential for Options 2 and 3 to have more localised impacts on the historic environment in the south of borough and to the south east of Shepshed; however, given the relatively insensitive location of site options, and once mitigation is taken into account these are unlikely to result in significant effects. Consequently, **neutral effects** are predicted for each option.

<sup>12</sup> Charnwood Borough Council (2012) Borough of Charnwood Landscape Character Assessment.

## Deprivation

Option 1	0	Option 2	?	Option 3	+
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### Appraisal commentary

In terms of deprivation there is little to distinguish between the options. All of them propose a similar quantum of employment growth and this is located predominantly in the same areas. Option 2 may have some minor localised benefits for communities and pockets of deprivation in the south of Borough through the delivery of 10ha of better quality employment land, which could help to improve access to higher quality employment opportunities. Better quality sites may also be more likely to be attractive to market and result in investment. There is therefore potential for some minor benefits compared to option 1, but there is a great deal of uncertainty given that it is unknown which sites would be developed, what type of jobs would be secured and whether deprived communities could access such jobs. In fact, certain higher skilled jobs may not be accessible to deprived communities with lower skills (but conversely could help to raise aspirations). Overall, an uncertain effect is predicted taking all of these factors into account.

Option 3 could have similar minor localised benefits through the provision of 10ha of employment land to the south east of Shepshed.

In summary, options 2 and 3 are likely to have some additional **minor positive effects** compared to option 1. However, the effects are not predicted to be significant, and there are no distinguishable differences between options 2 and 3 with regards to tackling deprivation.

## Healthy lifestyles

Option 1	0	Option 2	0	Option 3	0
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### Appraisal commentary

As for deprivation there is little to distinguish between the options in terms of healthy lifestyles. All of them propose a similar quantum of employment growth and this is located predominantly in the same areas. Option 2 may have some minor localised benefits for communities in the south of Borough through the delivery of 10ha of new employment land, which could improve opportunities to walk and cycle to employment. Option 3 could have similar minor localised benefits through the provision of 10ha of employment land to the south east of Shepshed. However, these factors are considered unlikely to have notable impacts on health, at least in the short and medium term.

With regards to open space and recreational facilities, the site options available for development do not contain formal open space or rights of way, and therefore effects are predicted to be neutral in this respect.

In summary, there are no significant differences between the options. Each option is predicted to have neutral effects with regards to healthy lifestyles, though Options 2 and 3 could have some minor positive benefits in the longer term should development involve green infrastructure enhancement and provide accessible jobs for local people.

## Housing

Option 1

0

Option 2

0

Option 3

0

### Appraisal commentary

The options will have broadly neutral effects on housing as they relate to the delivery of employment land during the life of the plan.

The provision of an additional 10ha of land for option 3 is not likely to lead to a substantial increase in the demand for housing, if at all. However, poorer quality sites that are released under Option 2 could potentially become suitable for housing delivery over time. The net change in housing provision as a result of this change in sites would be minimal though and therefore neutral effects are predicted.

## Local economy

Option 1

+

Option 2

+

Option 3

++

### Appraisal commentary

As previously stated, all of the options propose a similar quantum of employment growth and this is predominantly located in the same areas. A significant proportion of the proposed development is already committed or allocated; however, there are some minor differences in the location of some of the employment land proposed under Options 2 and 3.

For option 1, the implications of committed and allocated development is assumed to be understood and thus forms the 'business as usual' approach. However, commitment to this approach in the new Local Plan ought to ensure that the strategy remains appropriate in relation to economic growth. Therefore a **minor positive effect** is predicted.

Option 2 will result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This 10ha of employment land would be delivered in the south of the borough along the northern fringe of Leicester City (i.e. the same broad locations). Therefore, the effects on employment provision and investment are likely to be similar to option 1. However, the delivery of higher quality employment land may be more likely to attract investment in higher quality jobs, and therefore, a minor positive effect is predicted. The effects are likely to be localised given the nature of employment that would likely be appropriate on available sites for development in this area.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. This option would not only deliver an additional 10ha of employment land but also offers the opportunity to address demand for large warehousing that is not being delivered through the other options. Consequently, a **significant positive effect** is predicted.

In summary, all of the options have the potential for long term positive effects on the local economy through the delivery of employment land to meet identified needs. Whilst Option 2 would have a greater magnitude of positive effects compared to Option 1, the effects are still unlikely to be significant from a borough perspective. Option 3 has the potential for a positive effect of greater significance compared to the other options as it proposes the delivery of an additional 10ha of employment that will help to meet demands for larger warehousing that are not being met through other options.

## Accessibility

Option 1

0

Option 2

+<sup>?</sup>

Option 3

+

### Appraisal commentary

All of the options propose a similar quantum of employment growth and this is predominantly located in the same areas.

For option 1, the implications of committed and allocated development is assumed to be understood and thus forms the 'business as usual' approach. However, commitment to this approach in the new Local Plan ought to ensure that the strategy remains appropriate in relation to accessibility and transport impacts. Therefore **neutral effects** are predicted.

Option 2 will result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This additional 10ha of employment land would be delivered in the south of the borough, which has broadly good accessibility to Leicester City. Whilst this is positive, access to jobs is likely to be similar to option 1 as the sites developed would be within the same broad location. With regards to better quality jobs, it is perhaps more likely that these would be secured on higher quality sites, which could benefit communities in these areas and reduce the need to travel further afield to access such jobs. However, these effects are uncertain and likely to be minor. The effects on congestion and the road network would not be anticipated to be significant given the scale of growth and types of employment uses that would be expected to be delivered. A neutral / uncertain (potentially positive) effect is predicted overall, though there is uncertainty about whether the redistributed sites would help to reduce travel distances to higher quality jobs.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. This option would therefore also be positive in terms of accessibility to jobs given the proximity of the M1 as well as Shepshed and Loughborough. However, this approach would be likely to involve more HGVs and would also encourage car travel to access the site given its excellent links to the M1. On balance, a **minor positive effect** is predicted.

Overall, there are no significant effects generated for any of the options. However, options 2 and 3 have the potential for a minor long term positive effect as they both propose the delivery of higher quality employment land in broadly accessible locations.

## Minerals

Option 1

0

Option 2

-?

Option 3

0

### Appraisal commentary

All of the options propose a similar quantum of employment growth and this is located predominantly in the same areas, so there is little to differentiate between the options in terms of minerals.

Option 1 essentially represents a business as usual approach and thus a **neutral effect** is predicted.

Option 2 will result in the redistribution of 10ha of employment land to enable the release of poorer quality employment sites for other uses. This 10ha of employment land would be delivered in the south of the borough along the northern fringe of Leicester City. It is important to note that the precise location of sites to deliver this 10ha is unknown at this stage. There is the potential for this employment land to fall within sand and gravel minerals safeguarding areas in the south of borough. Development in this area could therefore potentially sterilise some of this resource. Though no specific site allocations have been identified in this area to meet minerals needs, a potential **minor negative effect** has been predicted as extraction may be appropriate on certain site options in the longer term. The replacement sites are largely located within the urban area and unlikely to have the same potential for effects on minerals.

Option 3 proposes the delivery of an additional 10ha of employment land for larger industrial units/warehousing. This would be delivered on one site that is situated adjacent to Shepshed, north east of the M1 Junction 23. A small proportion of the site falls within an igneous rock minerals safeguarded area and could therefore potentially sterilise some of this resource. However, given the location and characteristics of the site (i.e. visually intrusive to residential areas), it is considered unlikely that major works would be permitted in this area anyway. An extension to the existing quarry at Shepshed is more likely to be suitable to the south of the quarry. There are also alternative areas that may be more suited to extraction (in fact, allocated sites for minerals in the Leicestershire Waste and Minerals Local Plan (Pre-Submission, 2017) do not include sites within Shepshed. Taking these factors into account, the effects are considered to be **neutral**.

In summary, **neutral effects** are predicted for options 1 and 3 as workable mineral resources are unlikely to be affected (beyond the effects of committed and allocated developments). Though effects are not predicted to be significant for Option 2, there is potential for minor negative effects through the sterilisation of sand and gravel resources. There are uncertainties however as the precise sites that would be released are unknown at this stage.



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