AECOM

Birmingham Local Plan

Interim Sustainability Appraisal Report (Preferred Options)

Birmingham City Council

April 2024

Quality information

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Prepared for:

Birmingham City Council

Prepared by

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Transport

Transport currently accounts for around a third of CO emissions in Birmingham, over 95% of which is from road transport.

There are clear areas of Air Pollution exceedance in the city which brings related health and environmental impacts.

Increased trip generation as a result of population growth must be accommodated in a sustainable and equitable way. The transport network must also attract and support economic growth and access to employment, supporting local, regional, national and international investment.

A very small proportion of people who work and live in the city work from home and therefore avoid travelling to work. There is little evidence of people being actively encouraged to work from home.

More emphasis needs to be placed on smarter travel, discouraging unnecessary journeys and encouraging people to use public transport. Reducing the need to travel is linked to issues related to sustainable transport, air quality, health, climate change mitigation and adaptation and noise.

Connectivity must support efficient urban/housing development and density. Reducing reliance on cars will also serve to reduce the demand for car parking, releasing land for more productive use, for example new homes, new employment sites and green spaces.

Congestion impacts must be reduced with the annual cost of congestion to Birmingham's economy currently standing at £632 million. Road and rail infrastructure is already at or near capacity therefore a drastic reduction in private car usage and a reduced need to travel are essential.

Significant transport challenges and opportunities are presented by major projects and events such as HS2. A strategic approach to transport and development planning will maximise the positive outcomes from these.

The delivery of goods and services must be approached in a more sustainable way, reducing goods mileage and supporting lower impact last mile delivery options. Development and infrastructure investment must support changing freight and logistics demands.

Challenges and opportunities have been presented by the impacts of Covid19 on travel behaviours and choices including reduction in public transport usage.

Table 2.1

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
4. Waste and resource use	4a) Encourage and enable waste minimisation, reuse, recycling and recovery.	Will it reduce household waste generated/ head of population? Will it reduce commercial and industrial waste generated/ head of population? Will it increase rate/head of population of waste reuse and recycling? Does it divert resources away from the waste stream, including the use of recycled materials where possible?	Capacity of new waste management facilities by type (AMR). Percentage of household waste sent for reuse, recycling or composting. Municipal waste sent to landfill Residual waste per household.
4. Waste and resource use	4b) To ensure efficient use of natural resources such as water and minerals.	Will it improve use of natural resources like water and minerals?	Usage of water and

Prepared for:

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
9. Land and soil	9c) Encourage the efficient use of previously developed land and buildings and encourage efficient use of land.	Will it encourage the efficient use of land and minimise the loss of greenfield land? Will it value and protect the biodiversity/geodiversity (of	

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
11. Flooding	11a) To reduce vulnerability to climatic events and flooding.	Will it minimise the risk of flooding from rivers and watercourses to people and property? Will it reduce the risk of damage to property from storm events? Will it help reduce surface water nts?	

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
		Will it lead to the creation of new habitat? Does it ensure current ecological networks are not compromised, and future improvements are not prejudiced? Does it encourage and facilitate the creation of new ecological networks? Does it encourage multi-functional use of green blue corridors e.g. SUDs, sustainable transport?	
15. Accessibility and transport	15a) Increase use of public transport, cycling and walking as a proportion of total travel and ensure development is primarily focused in the major urban areas, making efficient use of existing physical transport infrastructure	Does it reduce road traffic congestion, pollution, and accidents? Will it encourage walking and cycling? Does it help to reduce travel by private car? Does it promote accessibility for disabled people? Will it improve access to or encourage the use of the canal network for a sustainable travel?	

3. Establishing options: Issues and Options Stage

Introduction

3.1 The ‘Issue % .d ή ξ ⋇ l M

3.7 **Option 5: Utilise some employment land for housing**: involves repurposing poorer quality / underused employment land for housing development.

3.8 **Option 6: Release Green Belt land for housing:** involves releasing Green Belt land for housing development. The Green Belt currently covers around 15% of the city's area. The majority is in the north of the city with smaller areas where the city boundary meets Sandwell to the west and Bromsgrove to the south. There are also a number of 'green wedges' along river valleys, such as the Cole Valley and Woodgate Valley. The only significant areas of Green Belt remaining are in the north east of Birmingham in Sutton Coldfield.

3.9 It is important to recognise that these options above are not 'mutually exclusive' and would not in themselves represent a spatial strategy for the Plan. Some of the options overlap with one another in terms of the locations that could be involved, and to meet identified housing needs, it is likely that a range of sources would need to be secured, rather than just one of these options.

3.10 The purpose of exploring and appraising options at this stage was not to compare them to one another (or say which is better or worse), but to identify what potential issues and opportunities each approach would generate, and then this could be fed into the development of a more detailed strategy (and reasonable alternatives), which is likely to contain elements of several of these initial options.

Employment options

3.11 The BLP will set out the amount of employment land required up to 2042. This is informed by the findings of the recent Housing and Employment Development Needs Assessment (HEDNA 2022) which identifies a need for 295.6 ha of employment land over the BLP period. However, the most recent assessment of available employment land supply (Housing Employment Land Availability Assessment 2022) (HELAA) estimates employment land supply capacity to be around 221.96 ha, leaving a shortfall of 73.64 ha which needs to be found through the BLP process. Therefore, the Issues and Options document considered the following broad options/ approaches to increase employment land supply:

3.12 **Option 1: To continue investigating and identifying further sources of land supply to address the shortfall:** the Council cites opportunities for future industrial development, identified (through the HEDNA and urban capacity work) within the Core Employment Areas (CEAs). Further potential opportunities have been identified but these are yet to be confirmed by the landowners concerned.

3.13 **Option 2: To accommodate the shortfall within other authorities in the wider Housing Market Area (HMA):** this is to be discussed by the concerned authorities to determine whether any employment land proposed in their forthcoming plans can meet some of Birmingham's need. For example, evidence for the Black Country Plan has identified 53 hectares of potential development land at the West Midlands Strategic Rail Freight Interchange in South Staffordshire that can cater for a share of Birmingham's B8 warehousing needs.

3.14 Similar to the housing options, the employment options are high level in nature, and not site specific. Therefore, the appraisals were undertaken in this context and were designed to inform the identification of a more detailed approach to employment (including detailed alternatives if they are reasonable).

SA Topic	SA Objectives
5. Economy and employment	5b) To achieve sustainable levels of prosperity and growth throughout the city.
5. Economy and employment	5c) To improve educational skills of the overall population
5. Economy and employment	5d) To maintain and enhance the vitality and viability of town and retail centres
7. Air quality	7a). Minimise air pollution levels and create good quality air.
7. Air quality	7b) Increase use of public transport, cycling and walking as a proportion of total travel and ensure development is primarily focused in the major urban

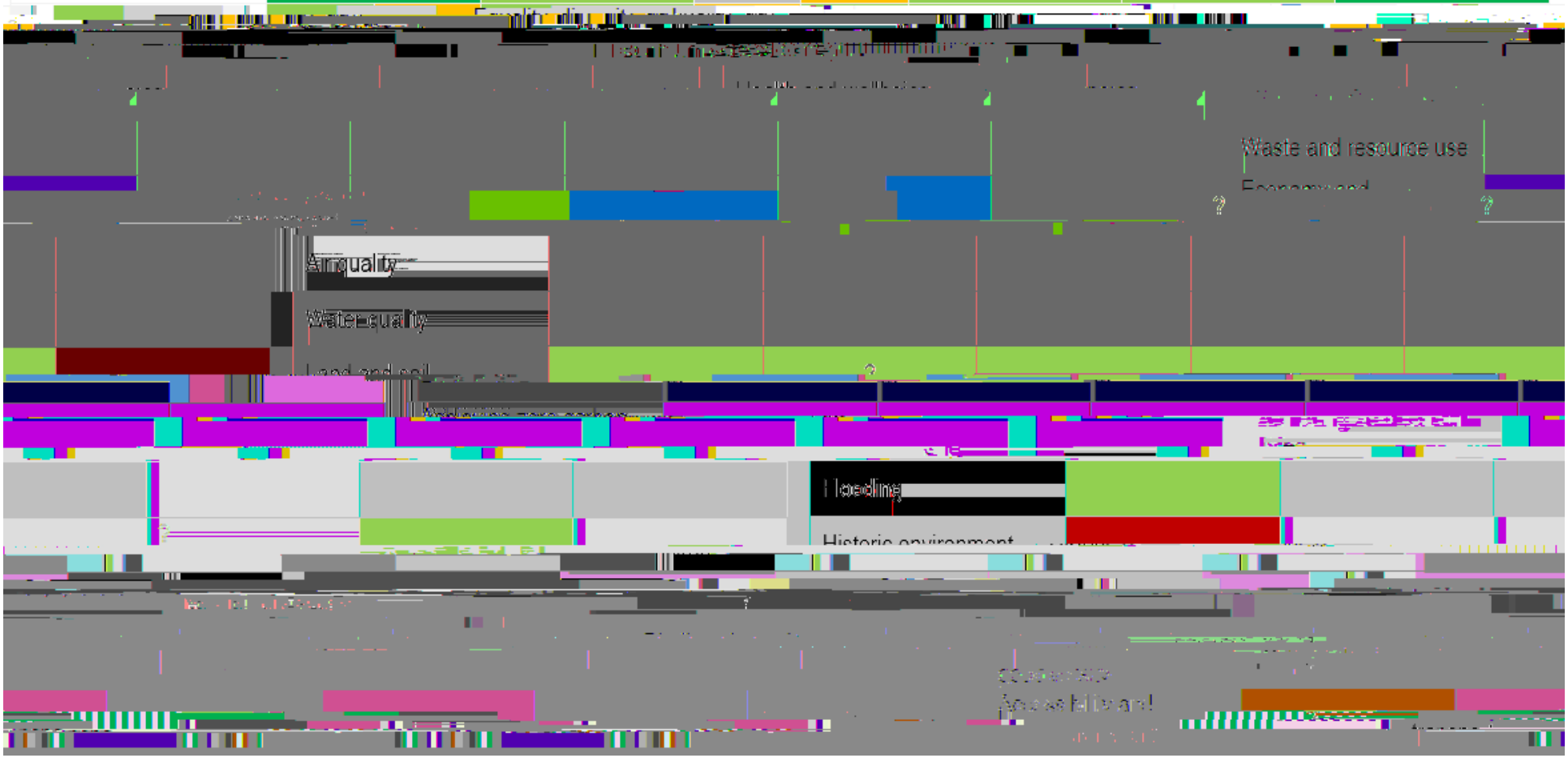
5.8 However, mixed effects are likely on health and wellbeing; positive ones due to the enhanced housing provision (including affordable housing) and potentially negative implications due to the reduction of open space which is already underprovided in the City. Mixed effects are also predicted with respect to the natural landscape; negative effects due to the loss of amenity and change to the existing landscape/ townscape character with potential positive effects due to reduced encroachment on areas of high landscape sensitivity and the potential for improved provision of higher quality open/ green space.

5.9 **Option 5** (Utilise some Core Employment Area land for housing) is likely to have positive effects on housing as it will improve housing land supply with knock on positive effects on health and wellbeing due to the increased choice of housing, including affordable housing. The option could also result in negative effects on health and wellbeing due to the location of new housing within employment areas. These may not be well suited to residential use due pollution or noise associated with some industrial / commercial premises and the lack of comprehensive walking/ cycling infrastructure within the Core Employments Areas (CEAs). The option also has mixed effects with respect to employment and the economy with additional housing helping support economic growth (positive effects) but potential negative effects due to the loss of employment land. Positive effects are likely with respect to the landscape, and land and soil topics as the option would reduce development pressures on areas of higher landscape sensitivity and non-urban areas containing good quality agricultural land.

5.10 **Option 6** (Release Green Belt for housing) could potentially generate significant positive effects on housing due to the improved land supply and potential for larger scale developments such as SUEs with associated beneficial effects on health, wellbeing and the economy. However, this option is likely to have negative effects on land and soil and the natural landscape as it will lead to the loss of some high-quality agricultural land and change the character of areas of landscape sensitivity in the Green Belt areas. Some locations in the Green Belt are also not ideally located in terms of accessibility.

Table 5-1 Summary of findings: Housing Growth Options (Issues and Options Stage)

SA Topic	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Housing						



7. Appraisal of proposed policy changes (Issues and Options Stage)

Introduction

7.1 The Issues and Options document put forward a range of ‘policy approaches’ (including cudi Æ ‘

7.7 The HEDNA concludes *'the analysis identifies a notable need for affordable housing, and it is clear that provision of new affordable housing is an important and pressing issue in the area'* adding that *'affordable housing delivery should be maximised'.*

7.8 Therefore, the proposed policy change could be beneficial in helping achieve

7.16 This form of living may also be more affordable than flats and may help reduce isolation with positive effects on health and wellbeing and is likely to be more sustainable particularly if located in areas with good access to services and transport. It may also be amenable and suited to regeneration/ conversion of under used office/ commercial buildings.

7.17 The HEDNA recommends that this type of accommodation be supported through

7.47 The effects will depend on the eventual policies drafted but generally beneficial effects are likely as the focused regeneration approach is likely to engender multiple benefits including improved design, better housing, employment and infrastructure provision through the proposed masterplanning appro

9.7 The following significance scores are used to describe the effects of the Plan (and any reasonable alternatives). The effects have been identified by an experienced appraisal team and informed by the baseline data and evidence gathered as part of the Scoping Report (and any subsequent updates).

Score	**Symbol**
Major positive effect	++
Moderate positive effect	++
Minor positive effect	+
Neutral effect / no relationship	0
Minor negative effect	-
Moderate negative effect	--
Major negative effect	---
Uncertainty	?

Are there any reasonable alternatives at this stage?

9.8 The strategy emerging from the evidence base is reflected in the Plan (i.e. there is an intention to plan for 103,000 additional homes by 2042, with a focus on higher density development in the City, repurposing of land in the urban areas, and continued regeneration of housing areas. It is acknowledged that there will be a residual amount of housing need that remains unmet, but the Council

9.23 Whilst four open spaces are identified for re-development, this is only partial redevelopment, with the aim of improving the quality of remaining open space. Additionally, whilst employment land is now being released for housing development, this is not to the detriment of economic objectives, with the identified employment needs through the Housing and Economic Development Needs Assessment (HEDNA) being met elsewhere.

9.24 Ultimately, the Council have demonstrated a proactive approach to identifying the required land supply and the measures identified to date to boost housing supply are likely to be beneficial for local communities. However, there remains an element of uncertainty, with identified unmet needs and a high reliance on growth in the wider Birmingham Housing Market Area (HMA). Despite this, the housing land supply demonstrates a sound strategy of accessible and well-connected housing development, that promotes sustainable transport options, inclusiveness, and community cohesion. This will be of particular benefit to more vulnerable groups, and a strong focus on regeneration and urban development should support existing communities by reducing deprivation (in relation to housing indicators).

9.25 The supporting policy framework should ensure that housing development within the City boundaries is high-quality, with place-making principles identified (Policy PG3), and that a wide range of housing types, sizes, and tenures are delivered to meet the identified needs (with a suite of dedicated housing policies – Policies HN1 – HN12). This includes meeting the needs of older people, disabled people, students, and Gypsies, Travellers and Travelling Showpeople, and appropriate rates of affordable housing delivery.

9.26 It is recognised that viability can affect the delivery of affordable housing, and this is reflected by a zone-based approach to targets. Despite this, the Council is seeking a minimum of 20% affordable homes in the 'Lower Value Zone' and the 'Core Zone' (Policy HN2), which should help contribute homes in areas of need.

9.27 To conclude, the strategy positively seeks to accommodate accessible, high-quality, and well-connected new housing development, and positive effects are anticipated as a result. Despite this, an element of **uncertainty** remains while there is a high reliance on neighbouring authorities in the wider Birmingham HMA to deliver against the unmet identified needs and ensure no shortfalls that can impact local communities. Taking a precautionary approach, there is ultimately the potential for y

9.34 On one hand, the quality of homes and the local environment would be improved, as would transport connections, access to local facilities and green infrastructure. For residents that remain or move into the area, this is likely to have positive

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9.40 Overall, the growth strategy focuses housing and employment development and regeneration in the most accessible ! ˆ 4 @ iblae d

9.54 Overall, the spatial strategy seeks connected development that supports healthy lifestyles and active travel opportunities, and provides residents with good access to healthcare services, employment and recreational opportunities, affordable housing, and nature. The policy framework seeks to ensure that future development is designed to standards that support high levels of energy efficiency, design out crime, and encourage active travel and social interaction. On this basis, **moderate positive effects** are considered most likely. To avoid negative effects arising in the longer-term, it will be important to identify how unmet housing needs will be met in the wider HMA and how this development will ensure future residents continue to be supported by high levels of accessibility, and important affordable housing contributions.

Appraisal of alternatives

9.55 The alternative identified at this stage relates to the spatial strategy, and the potential for additional Green Belt release to meet some of the unmet housing needs. Green Belt development would likely provide residents with good access to the surrounding countryside or areas of open landscape and the recreational opportunities associated with this. In particular, development would likely have good access to Sutton Park and / or could create new areas of open space as part of strategic development. Conversely, development would be less centrally located (and thus less accessible to social services and public transport).

9.56 Of note, this option would ultimately secure the delivery of more affordable housing within the city boundary, which is likely to benefit resident health in the long-term (though this might not overlap with areas that are suffering most from health inequalities). They would also present the opportunity to create new communities that are served with a range of community facilities. Enhanced / **major positive effects** are therefore associated with this alternative in relation to health and wellbeing.

SA Topic 4: Waste and

SA Topic 6: Air quality

Appraisal of the draft Plan

9.76 Birmingham notably suffers from poor air quality across the whole city area (linked to traffic emissions), and ultimately any growth strategy is likely to impact efforts to improve air quality by increased road traffic pressures. Though the whole of the City is designated as an AQMA, the central City locations tend to contain more monitoring locations where there are exceedances of pollutants recorded.

9.77 The proposed spatial strategy will focus development in the most accessible and well-connected areas of the city (primarily through increased densities, city centre sites, and estate renewal), which in turn can support residents with more sustainable transport choices, including active travel opportunities. By reducing reliance on the private vehicle, the plan can reduce road traffic impacts and indirectly support long-term air quality improvement objectives. This is further supported by policies such as Polic

SA Topic 7: Water quality

Appraisal of the draft Plan

9.84 By primarily utilising previously developed land in the city centre and urban centres, the spatial strategy supports the use of brownfield land. This will lead to positive impacts for water quality, as underutilised brownfield sites can be

9.89 The Local Plan supports these efforts, particularly those to improve water efficiency, by identifying design requirements for new development. Policy CE2 states that major residential developments should aim for no more than 100 litres per person per day through the incorporation of water saving features. Furthermore, the application of sustainable drainage systems will also help to reduce surface water loadings on the existing sewerage network, reduce the risk of sewer flooding, and free up capacity in wastewater treatment works. Development proposals are expected to demonstrate how they contribute to increasing Birmingham's capacity for water conservation and sustainable drainage and prioritise nature-based solutions (maximising the potential for multiple benefits) (Policy CE7).

9.90 None of the sites proposed for allocation fall within Groundwater Source Protection Zone 1. Six sites fall within zone 2, and 23 fall within zone 3. Policy CE7 includes a general requirement to ensure that water quality is not affected negatively by development, which should help to manage risks. The remediation of contaminated land on a range if sites should also reduce the risk of contaminants being mobilised due to future activity on sites. These measures should help reduce effects upon water quality, including groundwater. However, It may be beneficial to refer to the need for a proportionate hydrogeological risk assessment to be carried out where sites overlap with protection zones. This would help ensure that such issues were resolved.

9.91 In terms of watercourses, several plan policies are proactive in their approach to the naturalisation of river courses and seeking to improve environmental quality. These should help to achieve positive long term effects.

9.92

Appraisal of alternatives

9.109 This policy is also helpful in ensuring that new development explores the potential to incorporate renewable and low carbon energy generation, including by linking to heat networks and expanding networks.

9.110 Policy CE2 recognises the benefits of wider sustainable construction measures relation to water efficiency, waste, minerals and materials. Applying challenging targets in relation to sustainability will also help to further drive down greenhouse gas emissions.

9.111 Policy CE3 (Whole Life-Cycle Carbon) outlines that the plan presumes against the demolition of buildings and structures; instead it aims to increase the reuse and repurposing of the built environment unless it can be demonstrated that the retention of a building or structure poses a significant risk to health and safety. A whole life-cycle assessment will be required for development proposals that a) involve the demolition of a building or structure over 250m^2; b) will deliver 5 or more buildings and/or structures); and c) involve more than one development phase. The assessment requires development proposals to demonstrate how its location and design comply with energy, carbon, transport, and waste hierarchies; and how they minimise embodied emissions.

9.112 In addition to this, development proposals will be required to provide an assessment considering different design options based on the carbon hierarchy. This is

9.116 The strong focus on green infrastructure enhancement across several plan policies is also likely to bring benefits in terms of resilience

9.123 This includes several major development areas/sites being brought forward by Homes England and Birmingham City Council.

9.124 The following residential sites are noted with at least 20% of the site area falling within FZ2/3. The total amount of land affected is relatively minor (i.e. less than 30ha), and in some cases these areas could be avoided.

Warwick Barr Major Development Site
Edgbaston Mill Major Development Area
Housing - Former Holbrook Tower
Lakeside Centre, Kings Norton
Cheapside Major Development Site
Westwood Business Park
River Tame Corridor
One Stop Shopping Centre and adjacent land
Chester Street Industrial Units
Corner of Witton Road and Witton Lane
Smithfield Quarter
Lawley Middleway Major Development Site
Tame Road industrial units
Land Along River Tame
Park Square B

9.125 In response to identified flood risk, Policy CE7 (Flood Risk Management)

There are site specific requirements for flood risk assessments and mitigation measures to be agreed on several sites including Wheeler Street Shopping Precinct, Tame Road Industrial Units along the River Tame, South Parade Car Park Sutton Coalfield, Albert Road/Station Road Stechford, Cheapside Major Development Site.

9.128 More broadly, Policy CE17 (The Canal Network) highlights that proposals that would have impacts upon flooding will not be supported. In addition, Policy HN12 (Healthy Neighbourhoods) requires buildings to ensure that the risk of flooding is effectively managed. In support of this, Policy CE1 (Climate Change) supports flood resilient buildings and infrastructure design for all developments.

9.129 To conclude, the strategy positively seeks to avoid development in areas at greatest risk of flooding, and where this is not possible, the policy framework suitably mitigates this through measures such as SuDS. As a result, **neutral effects** are anticipated under this SA objective.

9.130 Despite this, an element of **uncertainty remains** with respect to the potential for dense urban sites to lead to increases in surface water flooding. In this respect, there is ultimately the potential for **minor negative effects** should surface water flood risk be difficult to manage on some sites.

Appraisal of alternatives

9.131 Development at the sites/locations within the Green Belt is assumed to lead to further adverse impacts on flooding given that greenfield development would lead to an increase in non-permeable surfaces (potentially increasing flood risk). However, it is noted that all the Green Belt sites predominately fall within Flood Zone 1.

alter its character in as far as it would no longer contribute to the areas industrial and commercial heritage. These are minor effects.

ü **11-16 Tenby Street North** – These buildings form an important frontage to the street and represent the areas industrial heritage.

9.135 In this context, the plan sets out a range of measures to avoid negative effects and maximise positives, which are discussed below.

9.136 CE16 (Historic Environment) is the principal policy for managing effects on heritage. It builds upon requirements in the NPPF to set out a range of locally specific features that need to be considered, protected and enhanced through development. This should help to protect a wider range of features that are important to Birmingham's history and its 'story', rather than simply protecting designated heritage assets.

9.137 It is also important to protect the identify of neighbourhoods beyond their physical appearance. For example, the Jewellery Quarter's character is partly based upon the presence of small scale industries and small workshops. It is important to ensure that land use changes do not lead to such uses being permanently displaced and changing the dynamic of locations negatively. In this respect, PG4 is positive as it mentions the importance of the Jewellery Quarter and the provisions within the Neighbourhood Plan. Policy EC4 is also positive as it states that independent and niche businesses which define certain locations are to be continued to be supported

9.138 Several Growth Zone policy aims and Site Specific Requirements provide further direction for development across the City, to build upon the principles of CE16 and other general plan polici

Bill House Site Requirements will help to ensure that enhancements to

9.149 The Green Belt is considered through Policy CE15 (Green Belt), which states that inappropriate development within the Green Belt will only be permitted in exceptional circumstances. The exception to this is development proposals concerning previously developed land and buildings in the Green Belt; such proposals will be assessed in relation to national planning policy.

9.150 Policy CE9 (Green Infrastructure and Nature Recovery Network) outlines the City Council's intention to maintain and expand Birmingham's Green Infrastructure (GI) Network, which includes the city's urban forest. Notably, new development will be required to protect the integrity of the GI Network and contribute to its enhancement and expansion where possible.

9.151 The city's Blue Infrastructure (BI) Network, including urban water infrastructure and habitats, will also be protected and enhanced.

9.152 Policy CE13 (Open Space) performs well from a landscape perspective as it seeks to protect open space from development. It only permits development of open space in certain circumstances. For example, where the lost site will be replaced by a similar open space which will be of at least equivalent accessibility, quality and size.

9.153 More broadly, Policy PG3 (Place-Making) outlines that new development must make multi-functional landscape and GI integral to scheme design. This is important given the urban locations of sites within the spatial strategy.

9.154 Additional detail is provided in area specific policies (e.g. growth zone policies and site requirements) which broadly seek to:

Ensure that development is in-keeping with the current landscape.

Create linear parks / green corridors in the growth zones with accessible landscaped walkways.

Retention of existing trees.

Controlling developable areas on large strategic sites and implementing landscape buffer zones.

9.155 To conclude, the strategy positively seeks to avoid development in the most sensitive locations from a landscape perspective, and positive effects are anticipated as a result. There could potentially be some minor negative effects as a result of intensification in urban areas, but a range of policies in the Plan seek to ensure that these are avoided, mitigated and wherever possible for enhancements to be secured. As such, a residual **neutral effect** is predicted.

Appraisal of alternatives

9.156 Development of the sites / locations that have been identified within the Green Belt is assumed to lead to adverse impacts on the landscape. The Green Belt currently contributes to landscape character, provides key views from nearby settlements, maintains separation between built up areas and provides open space in areas that are mostly urban. Development would ultimately lead to a deterioration in thelead to a

9.181 The Local Plan seeks to achieve a substantial increase in development in the central parts of the City and along key transport corridors. This could potentially increase congestion, but the supporting Plan policies are likely to encourage and enable increased use of public transport, walking and cycling (offsetting increases in traffic and congestion). The key policies are discussed below.

9.182 Policy CY1 (A Sustainable Transport Network) forms the basis of the policy framework with regards to transport. It aims to deliver a sustainable, high quality, integrated transport system, where the most sustainable modes offer the most convenient means of travel, which should encourage its uptake. The policy outlines the four principles of the Birmingham Transport Plan, which will underpin the policy, and lists what will be required to deliver a sustainable transport network. This includes working with national, regional and local partners to lobby for interventions and policies outside of the council's control. The policy performs well in this respect.

9.183 Active travel is addressed through Policy CY2 (Active Travel), which prioritises the provision of safe and pleasant walking environments throughout Birmingham. The policy also encourages cycling and outlines plans for a city-wide programme of cycling infrastructure improvements.

9.184 It seeks to achieve this through training and behavioural change initiatives, which are proven ways of encouraging a modal shift from the private car to more sustainable modes of transport such as cycling. The policy outlines the requirement for developments to achieve 15 minute neighbourhoods, which incorporate the principles of healthy streets, pedestrianisation, safe and pleasant

9.195 Another point worth discussing is the likelihood of housing needs not being met

10.

APPENDIX A – The SA Framework

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
3.Health and wellbeing				

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
5. Economy and employment	5a). Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants.	Does it encourage and support a culture of enterprise and innovation, including social enterprise? Will it reduce unemployment, especially amongst disadvantaged groups? Will it improve the resilience of business and the economy? Will it improve economic performance in disadvantaged areas? Will it encourage indigenous business?		

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
5. Economy and employment	5c) To improve educational skills of the overall population	Will it improve qualifications and skills of young people and adults? Does it ensure that Birmingham's workforce is equipped with the skills to access high quality employment opportunities suited to the changing needs of Birmingham's economy whilst recognising the value and contribution of unpaid work?	Working age population qualified to at least Level 2 or higher. Working age population qualified to at least Level 4 or higher. Achievement of 5 or more 9-4 grades at GCSE or equivalent including English and Maths. Children in care achieving 5, 9-4 GCSEs (or equivalent) at Key Stage 4 (including English and Maths).	Population Material assets Human health

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
			Net additional dwellings in the City Centre (AMR).	
7. Air quality	7b) Increase use of public transport, cycling and walking as a proportion of total travel and ensure development is primarily focused in the major urban areas, making efficient use of existing physical transport infrastructure	Does it reduce road traffic congestion, pollution and accidents? Will it encourage walking and cycling? Does it help to reduce travel by private car? Will it improve access to or encourage the use of the canal network for sustainable travel?		

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		ryu | n?		
10. Achieving zero carbon living	10a) Minimise Birmingham's contribution to the cause of climate change by reducing emissions of greenhouse gases from transport, domestic commercial and industrial sources.	Will it contribute to Council's decarbonisation agenda? Will it reduce emissions of greenhouse gases by reg Ȳ gte		

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
10. Achieving zero carbon living	10b) Promote and ensure high standards of sustainable resource efficient design, construction and maintenance of buildings	Has the installation of water source heat pumps using water from the canal been considered? Will it increase the number of buildings which meet recognised standards for sustainability? Will it reduce the need for unnecessary carbon costs maintenance? e.g., reduce mowing of amenity grassland via creation of pollinator areas flowering perennials & scrub.	Number of buildings meeting Code for Sustainable homes/BREEAM Standards	Climatic factors Population Flora Fauna Human Health Biodiversity Landscape Water Material assets Air Quality

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
10. Achieving zero carbon living	10c) Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.	Will it reduce the emissions associated with transport?	Reduction in the amount of emissions associated with transport.	Climatic factors Population Flora Fauna Human Health Biodiversity Landscape Water Material assets Air Quality

		Will it conserve and enhance buildings, monuments, sites, places, areas and landscapes of heritage interest or cultural value (including their setting) meriting consideration in planning decisions? Will it conserve and enhance features of built and historic environment and landscape?
12. Historic environment	12a) Value, conserve, enhance and restore Birmingham's built and historic and archaeological environment and landscape.	

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
			landscape character and visual ass ɹ Mni lcn	

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		Does it encourage and facilitate the creation of new ecological networks? Does it encourage multi-functional use of green blue corridors e.g. SUDs, sustainable transport?		
15. Accessibility and transport	15a) Increase use of public transport, cycling and walking as a proportion of total travel and ensure development is primarily focused in the major urban areas, making efficient use of existing physical transport infrastructure	Does it reduce road traffic congestion, pollution and accidents? Will it encourage walking and cycling? Does it help to reduce travel by private car? Does it promote accessibility for disabled people? Will it improve access to or encourage the use of the canal network for a sustainable travel?	Net additional dwellings in the City Centre (AMR). Percentage of new residential development within 30 mins public transport time of a GP, hospital, primary and secondary school, employment and a major shopping centre (AMR). Percentage of trips by public transport into Birmingham City Centre (AMR). Percentage of completed retail, office and leisure development in town centres (AMR). Number of people killed or seriously injured in road accidents in Birmingham. ê s ice	

APPENDIX B – Appraisal of Housing Options

Option 1 Increased Housing Densities

1. This option seeks to maximise housing densities (dwellings per hectare of land) on sites allocated for residential development within the City Centre. The adopted BDP (policy TP30) specifies densities ranging from 40 to 100 dwellings per hectare (dph) depending on location with the highest density (100 dph) proposed for City Centre sites, 50 dph in areas well served by public transport and 40 dph elsewhere. Following analyses of recent planning permissions and sites completed within the last 3 years the Council concluded that average densities in and around urban centres is around 70 dph which is substantially higher than the density specified in TP30 for 'areas well served by public transport'. The analyses also showed that densities (for developments granted consent / completed) in the City Centre average 400 dph; four times the target specified in TP30. Birmingham contains a large network of centres ranging from the City Centre that holds a national position as a retail destination to local centres which meet immediate day-to-day needs. More than 70 other (local) centres are identified in the Birmingham Development Plan. These centres are varied in terms of size and play a vital role in providing for the every-day needs of residents, providing a varied retail offer, employment, banking and administrative needs, leisure and social opportunities. Some of these serve not only local residents but are often utilised by visitors from the wider region and further afield. Birmingham's centres are diverse and have a range of uses, particularly retail but also other focal points for the local communities which they serve, for example places of worship, community centres, universities and offices.

2. **Housing**: This option could contribute towards **significant positive effects** for

8. **Economy and employment**: Further concentration of growth within the City Centre and urban centres is likely to provide improved accessibility to employment opportunities within these locations.

9. It is also likely to improve footfall with positive knock on effects on businesses located in centres. Development may further help to improve the attractiveness of City Centre areas through regeneration of neglected parts of the centre and brownfield sites thus making them more attractive to visitors.

10. Overall, this approach could help to contribute towards **significant positive effects** due to improved access to jobs, increased footfall and enhanced attractiveness of City centre and urban centres with the potential to improve the local economy and local employment opportunities.

11. **Air quality:** The whole of Birmingham has been designated an Air Quality Management Area (AQMA) declared for Nitrogen Dioxide (NO) in 2010. The Council stated its commitment to reducing exposure levels in its Air Quality

13. **Land and soil:** The densification approach proposed under this option is likely to have positive effects on land and soil. Increasing densities within the City centre and urban centres will reduce development pressure on agricultural land elsewhere in Birmingham. Therefore, this option is envisaged to contribute **positive effects** on land and soil as it is likely to reduce the loss of agricultural land to development.

14. **Achieving zero carbon living:**

them into larger sites. National planning policy makes this possible through compulsory purchase powers. The effects of this option would clearly depend on the nature, size and location of the actual sites created through this approach. As this is unknown at this stage, the appraisal below is necessarily very high level.

24. **Housing**: This option is likely to produce beneficial effects with respect to housing as it is likely to boost land supply in the city helping to deliver a higher number of dwellings. It may also enable the provision of more affordable housing, particularly on larger sites where this becomes more viable. This approach may also allow the reuse of currently underutilised land (e.g. unsuitably located industrial facilities and vacant retail facilities) and facilitate the regeneration of neglected/ run-down locations within inner city areas, although the availability of larger sites may be limited within the city. Overall, whilst the acquisition process is likely to be complex and lengthy this option is predicted to produce some **positive effects** as it is likely to help meet some of Birmingham's housing shortfall.

25.

28. **Economy and employment**: The greater potential for regeneration may have positive consequences on improving the attractiveness of previously run down areas. It may also help improve land values and attract more investment to the regenerated areas. These factors are likely to have positive effects on the economy. On the other hand, this approach may also lead to the loss of some employment land (e.g. commercial/ industrial premises in unsuitable locations). At this stage therefore, **neutral effects** are predicted as the benefits of potential regeneration may be negated by the loss of employment land.

29. **Air quality:** The approach has limited scope to impact air quality though the housing growth will inevitably lead to increased traffic and congestion and therefore likely to exacerbate the current air quality issues. The Council may be able to implement measures such as car free neighbourhoods but this uncertain at this stage and therefore, **negative effects** are envisaged at this stage.

30. **Water quality:** as with other options discussed the additional growth proposed can potentially adversely impact the quality of water bodies through surface water runoff and treated wastewater effluent. The land assembly approach may give the Council more opportunity for instigating the provision of SuDS but this remains uncertain at this stage.

31. Possible **negative effects** are predicted due to the additional pollution likely from surface run-off and combined sewer over-flow events.

32. **Land and soil:** The locations of parcels to be identified and assembled under this approach are more likely to be within existing urban areas where there is very little (if any) good quality agricultural land. The approach may therefore help relieve some of the development pressures on non-urban areas (e.g. in the countryside) which are more likely to contain valuable agricultural land. Therefore, the effects are predicted to be **positive** but there remains a degree

35. **Historic environment:** Again, effects would be dictated by the location and size of sites assembled through this approach. If sites are located in less constrained areas (away from heritage assets / conservation areas) adverse effects would be less likely to occur. The approach may give the Council more control as to how developments in heritage constrained areas are shaped helping ensure that new development is appropriate in terms of design and scale to the character of its surroundings.

36. However, given the scale of growth proposed and numerous heritage assets and conservation areas within the City, it is unlikely that development in heritage constrained locations can be entirely avoided. Therefore, at this stage, uncertain effects are predicted on the historic environment (these could be positive and / or negative).

37. **Natural landscape:** effects would be largely dependent on the location of sites assembled. If these are focused on areas of low landscape sensitivity, then adverse effects would be less likely. The approach may give the Council more say on the design, layout and landscaping of new development on such sites. However, effects remain uncertain until the sites can be identified.

38. **Biodiversity and geodiversity:** Sites in environmentally constrained locations (within or in proximity to SSSIs, NNR, LNRs and SINCs) would be more likely to engender adverse effects. Effects specifically associated with this approach remain uncertain until the locations and sizes of sites to be assembled can be ascertained. However, given the overall scale of development expected, this approach could result in an overall reduction in open / green spaces in the City which would reduce biodiversity mobility and increase fragmentation leading to **negative effects** on biodiversity.

39. **Accessibility and transport:** As discussed above this option is likely to give the Council more control over how development is shaped on assembled sites. This could include the requirement to integrate new development with existing public transport and the provision of walkways and cycle routes for example. Accessibility would be largely dependent on the actual location of sites and therefore effects are uncertain at this stage. However, given the extensive public transport links (Bus, Metro, Sprint Rapid Transit and HS2) it is likely that development under this option would be well connected to the transport system therefore enabling better accessibility. In view of the above, **uncertain positive effects** are predicted at this stage.

Option 3 Further comprehensive housing regeneration

40. This option involves identifying housing regeneration areas such as large residential estates which do not currently provide high quality of life for residents. Several such schemes have been completed over recent years in Birmingham to provide new housing with enhanced community facilities and open space.

41. **Housing**: This option is likely to produce beneficial effects with respect to quality and choice of housing, but it is likely to have limited benefit in terms of

higher quality open/ green spaces within new developments, but this would largely depend on the sites chosen and associated site specific policies.

62. **Waste and resource use:** No direct significant effects are anticipated from this

businesses may potentially benefit from having a potential workforce pool in

assessed to be of high landscape sensitivity to development[8]. Further encroachment into Green Belt could therefore have negative effects. Development in Green Belt locations is more likely to be of a scale that supports new facilities (to ensure that they are sustainable), and therefore, the potential for **sign] cant negative effect ‘ potential**

APPENDIX C – Appraisal of Employment Options

Employment Option 1 Continue investigating and identifying further sources of land supply to address the shortfall

This option would involve identifying further opportunities for employment development within the city, including in existing employment areas such as the CEAs, and other locations identified by the Council. Effects would ultimately depend on the locations of sites identified; if these are located in the existing core employment locations (CEAs) then positive synergies would be likely as these areas already benefits from good transport links and are located close to other businesses and services. Conversely, if the chosen locations are in remote or less well connected locations which may not be well located with respect to transport infrastructure and services, potentially negative effects would be likely due to the less sustainable locations. Furthermore, if the identified sites lie in non-employment use areas, e.g. residential neighbourhoods, there may be adverse effects on existing uses. Overall, uncertain mixed effects are likely at this stage; uncertain positive effects if identified sites are in existing employment areas such as the CEAs and uncertain negative effects if the selected sites are relatively remote from services and infrastructure or in non-employment related use.

Housing: Effects would depend on the location of sites identified, if these are located outside residential areas, within employment areas such as the CEAs then effects are neutral. However, if identified sites are within residential neighbourhoods there may be **negative effects** on housing as the new employment areas may lead to disturbance, loss of privacy, road congestion, parking issues and potentially pollution. Some areas identified for employment expansion might also be potential sites options for housing, so a balance would need to be struck.

Equality, diversity and community development: As discussed above, effects are dependent on locations chosen. If sites are located within the CEAs, which overlap some of the most deprived areas in the City, there may be **positive effects** pertaining to improved accessibility to new employment opportunities. Conversely if sites selected are distant from the more deprived areas, there are less likely to be any beneficial effects (neutral). Increased employment in the City could also potentially add to air quality issues, which could disproportionately affect deprived communities (**negative effects**).

Health and wellbeing: Effects depend on the location of the additional employment land. As discussed above, if sites are placed in residential locations there is potential for **negative effects** on the health and wellbeing of residents due to issues around parking, congestion, noise and pollution. If sites are within existing employment locations, no significant effects would be expected in this respect. **Positive effects** may also arise if communities are able to access new employment opportunities.

Waste and resource use: Locations within existing CEAs may offer more scope for waste reuse / circular economy production due to the concertation of different industrial/ commercial and business uses in the same location where by-products or waste from one industry may be useful as a resource for another neighbouring facility, but this is uncertain as it depends on the exact location chosen and type of

commercial/ industrial uses in the area chosen. Therefore, uncertain **positive effects** are envisaged at this stage for sites located in existing employment areas, otherwise effects are unlikely to be significant for sites located outside the CEAs (i.e. **neutral**).

Economy and employment: Accommodating the employment land shortfall within the City is likely to engender positive effects as it would create more job opportunities; directly benefitting Birmingham's economy, generating growth and revenue locally. Location will have an important bearing on the magnitude of such effects, sites within existing employment areas and CEAs are likely to be more positive due to the synergies with exiting uses, transport infrastructure and services. However, there may be some locational specific factors for some industries that mean areas outside of the CEAs are more favourable. Potential **significant positive effects** are identified at this stage.

Air quality: Whilst effects depend on locations chosen and the type of employment use proposed, placing the employment land shortfall within the City is generally positive as it will benefit from existing transport infrastructure and services, particularly in the existing employment areas. It also means residents will travel shorter distances to access employment. Allocating employment land in more remote locations would be more likely to lead to longer journeys and increased reliance on car journeys. Having said that the scale of growth proposed will generate more industry associated emissions (e.g. from HGV traffic) and traffic leading to **negative effects** overall. These may be made worse if the shortfall is allocated in relatively remote, less well connected areas.

Water quality: No additional or significant effects are envisaged; neutral effects.

Land and soil: Mixed effects are predicted; locations within existing employment areas are not anticipated to produce significant effects as land would most likely be brownfield. However, negative effects would be more likely if sites were allocated in non-urban and rural/ semi-rural areas as this could lead to loss of BVM agricultural land. Potential / uncertain **negative effects** are predicted.

Achieving zero carbon living: Uncertain effects are envisaged at this stage; placing the employment land shortfall within the City is generally positive as it will benefit from existing transport infrastructure and services, particularly in the existing employment areas. This should help to reduce emissions arising from the construction of new infrastructure and limit additional emissions due to transport and travel. However, allocating employment land in more remote locations would be more likely to lead to longer journeys and increased reliance on car journey. It is difficult to predict whether per capita emissions would increase or decrease without understanding where growth would be located.

Flooding: Effects would be dependent on the exact locations and therefore, effects are uncertain at this stage. Some parts of the existing CEAs e en ⊤

employment areas are less likely to contain heritage assets, and therefore the provision of additional employment here can potentially reduce pressure on other more constrained locations, leading to **positive effects**.

However, if employment land is allocated in more constrained locations such as, in the vicinity of heritage assets or conservation areas, **negative effects** would be more likely due to the potential adverse impacts on the character and settings of the historic environment resulting from incompatible employment type uses.

Natural landscape: Existing employment areas are generally in less sensitive landscape areas therefore locating more employment land in these locations is unlikely to adversely impact the landscape and could potentially reduce pressure in more sensitive locations (i.e. **positive effects**) Location of employment land in more sensitive landscape areas would potentially lead to negative effects as the allocations are likely to be out of character with the existing landscape character.

Biodiversity and geodiversity: Effects would be dependent on the location of sites selected for development. Locations in existing employment areas are unlikely to lead to development in environmentally constrained areas, and could reduce pressure elsewhere, which is **potentially positive**. However, if employment land is located in more environmentally constrained areas, this option may lead to **negative effects**, due to potential loss of habitats and fragmentation as well as disturbance and pollution impacts.

Accessibility and transport: Locating more employment land within existing employment areas is likely to have **positive effects** as these already benefit from transport infrastructure and services. However, not all of these locations would necessarily support sustainable travel, and so significant positives cannot be presumed at this stage. Selecting more remote locations could be more likely to have **negative effects** as they would likely be less well connected to transport and services, leading to increased reliance on car journeys.

Air quality: Placing the employment land shortfall outside the City could lead to some degree of out commuting with adverse consequences on air quality. On the other hand, this may reduce further deterioration in the AQMA which covers the whole of Birmingham. As discussed above effects are likely to be insignificant when considered in proportion to the overall growth in employment land, the majority of which is to be provided within the City. On balance, **neutral effects** are predicted.

Water quality: No additional or significant effects envisaged; **neutral effects**.

Land and soil: The effects of growth in other HMA areas are difficult to predict without knowing the nature of the land involved. However, it is possible that this could involve some greenfield agricultural land, which are potential negative effects in those locations (but not from a Birmingham City only perspective). If growth is on land that has already been identified for employment growth, then the additional effects on land are neutral / **positive** as it would reduce pressure for further land use in Birmingham.

Achieving zero carbon living: Seeking to meet a shortfall in employment land outside of the City could have mixed effects. In one respect, it could lead to increased travel /commuting from residents out of Birmingham, which could increase emissions from transport. On the other, it would reduce emissions being generated within Birmingham at new employment locations. These emissions would still arise elsewhere though, so overall, **neutral effects** are predicted.

Flooding: Meeting employment land shortfalls outside of the City would mean that there are **neutral effects in terms of flooding** and difficult to predict in the City itself. The nature of effects in the wider HMA are difficult to predict without knowing the location

Accessibility and transport: Locating more employment land within the wider HMA could lead to increased commuting (from Birmingham to the HMA) to access employment. This is negative, as it increases the length of trips and could lead to more car travel and poorer access to jobs for some communities.

On the other hand, some HMA employment locations have good accessibility by sustainable modes of travel, and this could be preferable to poorly located sites in Birmingham itself. These are potential **positive effects**, but a degree of uncertainty exists.