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Birmingham Local Plan

Interim Sustainability Appraisal Report (Preferred Options)

Birmingham City Council

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Quality information

Prepared by	Checked by	Verified by	Approved by
Omar Ezzet *Consultant*	Cheryl Beattie *Principal Consultant*	Ian McCluskey *Associate*	Nick Chisholm-Batten *Technical Director*
Emma Hazell *Consultant*			
Ian McCluskey *Associate*			

Prepared for:

Birmingham City Council

Prepared by:

AECOM Limited

aecom.com

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1. Introduction

1.1 The emerging Birmingham Local Plan (BLP) will shape how the city will develop over the next 20 years. It will set out the spatial strategy and planning framework to be used to guide development in the city up to 2042.

1.2 Once adopted (c. 2026) the BLP will replace the existing Birmingham Development Plan (2017), Aston, Newtown, Lozells Area Action Plan (2012) and Longbridge Area Action Plan (2009).

1.3 A Preferred Options Document has been prepared at this stage, which sets out the Council's preferred development strategy, draft policies and site allocations, taking into account the evidence and views gathered to date.

1.4 A sustainability appraisal (SA) is being undertaken alongside the Local Plan review, which is a legal requirement. The aim of SA is to assess the effects of a Plan (and reasonable alternatives) with a view to identifying significant effects and identifying ways to minimise negative effects and maximise the positives.

1.5 This report describes and presents the findings from the SA process, which has included several interim steps including 'scoping', the appraisal of 'issues and options' and the appraisal of the preferred options version of the plan.

1.6 The structure of the SA report is as follows:

1. Introduction
2. Scoping Stage
3. Establishing Options – Issues and Options Stage
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2. Scoping stage

Introduction

2.1 The aim here is to summarise the scope of the SA, i.e. the sustainability themes and objectives that should be a focus of the SA. Full details of the process and outputs can be found in the SA Scoping Report (Website link to Sustainability Appraisal Scoping Report).

Consultation

2.2 The SEA Regulations require that "when deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies". In England, the consultation bodies are the Environment Agency, Historic England, and Natural England. These authorities were specifically invited to comment on the scoping report in August 2022, as well as making the report available to review on the Birmingham City Council Website and notifying stakeholders on the Council's consultation database. Responses received were taken into account and updates presented in an updated version of the report.

Key sustainability issues

2.3 Scoping is an iterative process, and so the scope of the SA has been updated as appropriate as the Plan progressed. The following key sustainability issues are those that were identified through the scoping process in 2021/22 and have informed the development of a sustainability appraisal framework. The key issues are identified through consideration of the policy context and baseline information for a range of sustainability topics.

Population

- Birmingham has a higher proportion of young population than the national average, with higher proportion of Pakistani/Bangladeshi community in the city. The population of the city is set to increase and in line with national trends it is expected that ageing population groups will also increase.
- A growing population has the potential to place additional strain on the transport network adding to congestion, air pollution, road safety concerns and carbon emissions. To mitigate this, a significant reduction in private car usage and the overall need to travel is required.
- The Index of Multiple Deprivation has remained unchanged since 2013. Birmingham is the 7th most deprived authority in England in 2019. The city has the highest percentage of people living in most deprived areas.

Housing

- The rate of homelessness in the city has risen sharply.
- Home ownership is lower in the city than the national and regional average.
- Affordability within the city is still a significant problem, especially for the young population.

- Provision of 3- and 4-bedroom accommodation is decreasing in the city. This may lead to shortages in the availability of quality homes for people with families. The city has high proportion of Pakistani/Bangladeshi communities who tend to live in large extended families.
- There is a limited amount of affordable (rented / part-owned) homes in the city including those provided by the Council.
- There is lack of council housing in the city especially family homes.
- The average house price in the city has been steadily increasing.

Education

- The early years, KS1, KS2 and KS4 attainment is below the national average whereas attainment is better for the 16-18 age group.
- The city has a lower percentage of working age residents with higher level qualifies to NVQ3 and NVQ4 than both the regional and national average and has a higher share of residents who have no qualifications.
- 12.9% of Birmingham's working-age population has no formal qualifications compared to 7.5% nationally.
- An increase in housing development could place pressure on the existing schools in terms of school places.
- High house prices could lead to shortage of lower paid and key workers (i.e. teachers, nurses etc.) living in the area.

Health and wellbeing

- Life expectancy in the city is lower than the national average.
- Infant mortality rate is significantly higher than the national average.
- Hospital admissions for over 65's relating to mental health have increased by 25% since 2013.
- Fuel poverty is significantly higher than the national average.
- Obesity and physical inactivity is an issue for the city.
- High levels of deprivation are linked to reduced travel opportunities and therefore access to amenities and employment and skills opportunities. Increased opportunities for safe active travel can have significant health and wellbeing benefits.

Water and water quality

- The quality of rivers and waterways in Birmingham is generally moderate, and none of the rivers meet good ecological status.
- In terms of water consumption, the rate is similar to the national average.
- An increase in development will place extra pressure on water resources.
- Development proposals can lead to an increase in impermeable surfaces that will not only exacerbate flood risk from surface water run off but also result in the conveyance of pollutants to watercourses – both of which can have impacts on water quality.
- Climate change will impact water resources in terms of water supply as well as water quality i.e. hotter drier summers increasing demand for water supply; less frequent rainfall.

Renewable energy and energy efficiency

- There is a need to increase renewable energy provision in the city.
- Development will need to incorporate sustainable construction, energy efficiency and renewable energy, including reducing CO_2 emissions to achieve zero carbon standards.

Climate change

- There is a need to balance housing and economic growth with reduced carbon emissions as climate change is a significant issue facing the city.
- The need to ensure that development is designed and delivered in ways that mitigates the effects of climate change, but which also allow for adaptation to climate change.
- There needs to be adaptation measures put in place to ensure developments of the future are able to adapt to climate change

Waste

- Recycling rates for the city are significantly lower than the national figure.
- An increase in development will lead to an increase in construction waste and the need for this to be disposed of properly.
- Increased development will lead to an increase in household waste generation.

Air quality

- Air pollution is a significant issue in the city as the whole City is designated as an Air Quality Management Area (AQMA); the main source pollutant being nitrogen dioxide as a result of pollution from vehicle emissions. There is a strong correlation between traffic congestion and poor air quality.
- To prevent further deterioration to air quality the population will need to transform the way they travel and move away from fossil fuels.
- Development has the potential to lead to the deterioration in air quality due to increased traffic movements, unless a modal shift away from car use to sustainable transport measures is achieved.
- The city suffers from the lack of a comprehensive electric vehicle charging network.

Soil quality

- There is very little high-quality soil due to the built-up nature of Birmingham.

Efficient use of land

- Good use is being made of previously developed land as a very high proportion of new housing and office development has and is taking place on previously developed land.

Noise

- Noise pollution is an issue in some parts of the city. Birmingham airport and traffic are the main source of noise in the city. This trend is considered likely to continue.

Green Infrastructure, biodiversity and geodiversity

- Development could put pressure on the existing sites of ecological and biodiversity importance.
- Climate change issues along with extreme climate events could lead to destruction of sites of biodiversity/geodiversity importance.
- Biodiversity is linked to issues related to air quality, soil quality, water quality, natural landscape, health.
- Geodiversity is linked to issues related to water quality, soil quality and natural landscape.

Built and Historic Environment

- Short-term visions for the development and demand for new housing and other needs could result in inappropriate development and demolition, which could affect the character of historic areas/buildings within the city.
- New development can have an impact on the historic setting and character of the area. However good design has the potential to enhance and improve local character and setting.

Employment and Skills level

- The claimant unemployment rate is higher than any other core city and higher than the national average.
- Unemployment figures are slightly higher than national average.
- The GDP per head is well below the national average.

Culture sport and recreation

- Birmingham is internationally recognised for sports and exhibitions.
- The Commonwealth Games 2022 has strengthened the city's position in terms of sport and recreation.
- Culture/Sport/Recreation is linked to issues related to health, poverty, community involvement, biodiversity, natural landscape, sense of place and efficient use of land.

Crime and safety

- Birmingham City has higher rates of crime compared to the other major city's in the West Midlands.
- The overall crime rate in Birmingham in 2020 was 103 crimes per 1,000 people. This compares poorly to the West Midlands's overall crime rate, coming in 11% higher than the West Midlands rate of 91 per 1,000 residents.
- Crime is linked to issues related to poverty, equality, learning and skills and housing.

Transport

- Transport currently accounts for around a third of CO_2 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.

SA Framework

2.4 Table 2.1 presents a list of objectives, supporting criteria and potential monitoring indicators that form the backbone of the SA scope. Together they comprise a 'framework' under which to undertake assessment.

2.5 The objectives are grouped by SA Topics and supported by a range of guiding questions. The intention of the SA is not to answer every single guiding question, rather these are to help prompt and guide the appraisals. A range of supporting monitoring indicators have been proposed at this stage, but these will need to be revisited throughout the SA process to ensure that they reflect any significant effects that are identified.

Table 2.1 The SA Framework

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
1. Housing	1a) To meet housing needs of the current and future resident and by providing decent affordable homes of right quality and type.	Will it reduce homelessness? Will it provide a mix of good quality housing, including affordable homes?	Number of people recorded as homeless. Net additional dwellings. Housing mix (types, size, tenure) Net additional pitches Number of extra care homes
2. Equality, diversity and community development	2a) To promote safer communities and reduce the fear of crime and antisocial behaviour.	Will it reduce the fear of crime in all age and cultural groups? Will it reduce antisocial behaviour amongst the population? Will it promote design that discourages crime?	Community safety crime rates in the city Serious acquisitive crime rate. Reducing arson incidents. Serious violent crime rate. The number of gun crimes committed in Birmingham.
	2b) To reduce Index of Multiple Deprivation (IMD) to address poverty and help improve access to facilities and services for disadvantaged individuals and communities	Will it reduce deprivation and improve access to services and facilities?	Reduction in IMD score at ward and super output area level.
	2c) Ensure easy and equitable access to services, facilities and opportunities.	Will it improve access to services and facilities? Will it maintain and improve access to key services and facilities for all sectors of the population? Does it promote accessibility for disabled people?	
	2d) Support, empower and connect communities to create a healthier and just society.	Will it help to create a better healthier and just society? Will it empower and connect communities?	Number of schemes with adequate infrastructure to improve social inclusion and connectivity. Number of developments/schemes taking account of health as a material asset

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
3.Health and wellbeing	3a) To improve the health of the population and reduce health inequalities.	Will it improve access to health facilities and social care facilities? Does it help provide equitable access to health services? Will it encourage healthy lifestyles? Will it support the diverse range of health needs within the community? Will it contribute to a healthy living environment? (noise, odour etc?) Will lit avoid locating development in locations that could adversely affect people's health? Will it improve accessibility for people with disabilities? Will it provide sufficient areas of accessible green multifunctional spaces? Will it provide opportunities for contact with nature?	Condition of resident's general health(ONS/Local datasets) Change in the amount of Accessible Natural Greenspace (Natural England) Decent homes – council housing and RSLs. Percentage of the city's population having access to a natural greenspace within 400 metres of their home Hectares of accessible open space per 1,000 population in each ward Tree canopy cover in each ward (the threshold is 25%) Gap between the areas with the worst health and deprivation indicators and the population as a whole. Number of planning applications meeting ANGSt Number of people using parks & greenspaces after improvements
	3b) To improve access and availability of sports and recreation facilities.	Will it improve accessibility and availability of sports and recreation facilities?	Number of new sports pitches or other leisure facilities delivered annually through development.
	3c). To improve access and availability to open spaces.	Will it improve access and availability of open spaces? Will it improve access and wayfinding to the local canals?	Percentage of the city's population having access to a natural greenspace within 400 metres of their home Length of greenways constructed. Hectares of accessible open space per 1,000 population

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.
	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 minerals
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 improve business development and enhance competitiveness? Will it promote growth in key sectors? 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 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	Amount of land developed for employment by type (AMR). Employment land supply by type (AMR) Vacancy rates Loss of employment land to other uses (AMR). Working age people claiming out of work benefits in the worst performing neighbourhoods. Percentage of small businesses in an area showing employment growth Estimated new job creation. 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). Number of business paying business rates Number of vacant units in town centres.
	5b) To achieve sustainable levels of prosperity and growth throughout the city.		
	5c) To improve educational skills of the overall population		
	5d) To maintain and enhance the vitality and viability of town and retail centres		

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
		Birmingham's economy whilst recognising the value and contribution of unpaid work? Will it encourage indigenous business? Will it encourage inward investment? Will it make land available for business development? Will it increase the range of employment opportunities, shops and services available in town centres? Will it decrease the number of vacant units in town centres?	Increased levels of investment. Increased levels of spend. Enhanced retail facilities.
7. Air quality	7a). Minimise air pollution levels and create good quality air.	Will it improve air quality? Will it avoid exacerbating existing air quality issues in designated AQMAs? Will it reduce CO_2 emissions? Will it contribute to a healthy environment?	Estimated CO_2 emissions in the city. Nitrogen dioxide levels. Number of publicly available long stay parking spaces in the City Centre.
	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?	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. Number of children killed or seriously injured in road accidents in Birmingham.

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
8. Water quality	8a) Minimise water pollution levels and create good quality water.	Will it improve water quality? Will it support the achievement of Water Framework Directive Targets? Will it promote sustainable use of water? Will it support the provision of sufficient water supply and treatment infrastructure in a timely manner to support new development? Will it improve water quality on the canal network?	Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality (AMR). Biological quality of rivers (Working with the Grain of Nature). Percentage of water bodies classified as being of 'good ecological status'. Creation and retrofitting of SUDs in the city. Creation and retrofitting of SUDs in the city
9. Land and soil	9a) Minimise soil pollution levels and create good quality soil.	Will it maintain and enhance soil quality? Will it encourage the efficient use of land? Will it minimise the loss of soils to development? Will it encourage the use of previously developed land and/or the reuse of existing buildings? Will it prevent land contamination and facilitate remediation of contaminated sites?	Area of contaminated land. Percentage of development recorded on greenfield / brownfield land.
	9b) Encourage land use and development that creates and sustain well-designed, high quality distinctive and sustainable places.	Will it encourage development of well-designed and sustainable places? Will it improve sustainable use of previously developed land?	Number of well-designed places % of permissions granted on previously developed land as a % of previously developed land available within the city.

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
	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 previously developed land and buildings)?	Percentage of employment land, by type which is on previously developed land (AMR).
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. 10b) Promote and ensure high standards of sustainable resource efficient design, construction and maintenance of buildings 10c) Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.	Will it contribute to Council's decarbonisation agenda? Will it reduce emissions of greenhouse gases by reducing energy consumption? Will it increase the proportion of energy needs being met by renewable sources? Has the installation of water source heat pumps using water from the canal been considered?" Does it help reduce dependence on fossil fuels? Will it increase the number of buildings which meet recognised standards for sustainability? Will it reduce the emissions associated with transport? 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. Will it reduce reliance on carbon hungry materials e.g. bedding plants in parks?	Carbon dioxide emissions and Greenhouse gas emissions. Number of buildings meeting Code for Sustainable homes/BREEAM Standards Reduction in the amount of emissions associated with transport.

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 flooding? Will it safeguard land for future flood defences? Will development allow sufficient easement (8-20m) from the top of the bank of a watercourse / river? Will area flood more often or to a greater depth due to climate change ?	Estimated number of properties at risk from flooding Number of schemes incorporating nature based SUDs mechanisms. Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality Land available for future flood defences
12. Historic environment	12a) Value, conserve, enhance and restore Birmingham's built and historic and archaeological environment and landscape.	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? Will it conserve and enhance sites, features and areas or archaeological value? Will it safeguard and enhance the character of the local landscape and local distinctiveness? Will it provide opportunities to enhance the historic environment? Will it safeguard and enhance the character of the city's historic canal network?	Number of heritage assets recorded as 'at risk' Number of Conservation Areas with an up to date character appraisal and a published Management Plan. Number of Grade II Buildings considered to be buildings at risk. Number of buildings of historic or architectural interest brought back into active use. Number, or % or area of historic buildings, sites and areas and their settings (both designated and non-designated) damaged. Loss of historic landscape features, erosion of character and distinctiveness (HLC). Extent and use of detailed characterization studies informing development proposals (HLC).

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
			The proportion of housing completions on sites of 10 or more which have been supported, at the planning application stage by an appropriate and effective landscape character and visual assessments with appropriate landscape proposals.
13.Natural landscape	13a) Value, protect, enhance, and restore Birmingham's natural landscape.	Will it safeguard and enhance the character of the local landscape and local distinctiveness? Will it improve the landscape quality and character of the countryside? Will it reduce the amount of derelict, degraded and underused land?	Number of planning applications accompanied by a landscape appraisal. Development brought forward through regeneration projects.
14. Biodiversity and geodiversity	14a) To conserve and enhance biodiversity and geodiversity.	Will it conserve and enhance natural/semi natural habitats and conserve and enhance species diversity? Will it maintain and enhance European designated nature conservation sites? Will it maintain and enhance nationally designated nature conservation sites? Will it maintain and enhance locally designated nature conservation sites? Will it help deliver the targets and actions in the Biodiversity Action Plan? Will it help to reverse the national decline in at risk species? Will it protect and enhance sites, features, and areas of geological value in both urban and rural areas?	Change in the number and area of designated ecological sites. Impact on the Local Nature Recovery Network Recorded condition/status of designated ecological sites. Number of planning approvals that generated any adverse impacts on sites of acknowledged biodiversity importance. Percentage of major developments generating overall biodiversity enhancement Hectares of biodiversity habitat delivered through strategic site allocations

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?	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. Number of children killed or seriously injured in road accidents in Birmingham.
	15b) Ensure development reduces the need to travel and reduce the negative impacts of transport on the environment	Will it reduce traffic volumes? Will it reduce average journey length? Will it reduce the negative impact of transport?	Increase in road traffic. Workplace Travel Plans. Number of people working from home. Reduction in number of journeys

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators
	15c). Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.	Will it reduce the emissions associated with transport? Will it contribute to Council's decarbonisation agenda?	Reduction in the amount of emissions associated with transport.

3. Establishing options: Issues and Options Stage

Introduction

3.1 The 'Issues and Options' document set out the vision and objectives for Birmingham, explored the level of housing and employment growth and identified initial / high level options for the distribution of growth. It also considered potential policy approaches including changes to currently adopted BDP policies. These are summarised below.

Housing growth options

3.2 Five options were considered for the distribution of housing growth which can be summarised as follows:

3.3 **Option 1** Increase housing densities: 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 locations with the highest density (100 dph) proposed for City Centre sites, 50 dph in areas well served by public transport and 40 dph elsewhere. Having analysed the densities of sites recently granted planning permission and completed development schemes, the Council found that it is reasonable to revise densities as follows:

- 40 dph in suburban locations
- 70 dph in and around urban centres[1]
- 400 dph within and around the city centre[2].

3.4 **Option 2 More active public sector land assembly**: this involves acquiring parcels of land from multiple landowners (including through compulsory purchase) and assembling them to produce larger sites which deliver more housing and provide wider regeneration benefits. There are few of these opportunities within the city, but the approach could also be applied to smaller schemes which would typically result in higher densities.

3.5 **Option 3: Further comprehensive housing regeneration:** there have been several regeneration schemes of existing estates to deliver better homes, and improving the attractiveness of neighbourhoods and providing enhanced community facilities and open space. This option involves identifying further housing regeneration areas to deliver similar improvements.

3.6 **Option 4: Utilise poor quality under-used open space for housing:** this involves developing open space that is currently of limited value or underutilised to provide new housing. In many parts of the city there is already a shortage of good quality open space, so opportunities to utilise open space for housing are limited. The Council also aspires to increase the amount of and quality of open space in the city.

[1] 'Around' centres is defined as within a 400 buffer from the boundary of an identified local centre.
[2] 'Around' City centre is defined as within a 400 buffer from the boundary of the City centre.

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).

4. Methods: Issues and Options Appraisal

Introduction

4.1 The appraisals were undertaken by assessing each option / proposed policy change against a framework of sustainability topics, objectives and guiding appraisal questions.

4.2 The framework for the SA was established at the Scoping Stage of the SA process and finalised following consultation with a range of stakeholders (including the statutory consultation bodies).

4.3 Table 4-1 below lists the headline topics and objectives (Appendix A replicates the full SA Framework as established in the scoping report).

Table 4-1 The SA Objectives

SA Topic	SA Objectives
1. Housing	1a) To meet housing needs of the current and future resident and by providing decent affordable homes of right quality and type.
2. Equality, diversity and community development	2a) To promote safer communities and reduce the fear of crime and antisocial behaviour.
2. Equality, diversity and community development	2b) To reduce Index of Multiple Deprivation (IMD) to address poverty and help improve access to facilities and services for disadvantaged individuals and communities
2. Equality, diversity and community development	2c) Ensure easy and equitable access to services, facilities and opportunities.
2. Equality, diversity and community development	2d) Support, empower and connect communities to create a healthier and just society.
3.Health and wellbeing	3a) To improve the health of the population and reduce health inequalities.
3.Health and wellbeing	3b) To improve access and availability of sports and recreation facilities.
3.Health and wellbeing	3c). To improve access and availability to open spaces.
4. Waste and resource use	4a) Encourage and enable waste minimisation, reuse, recycling and recovery.
	4b) To ensure efficient use of natural resources such as water and minerals.
5. Economy and employment	5a). Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants.

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 areas, making efficient use of existing physical transport infrastructure
8. Water quality	8a) Minimise water pollution levels and create good quality water.
9. Land and soil	9a) Minimise soil pollution levels and create good quality soil.
9. Land and soil	9b) Encourage land use and development that creates and sustain well-designed, high quality distinctive and sustainable places.
9. Land and soil	9c) Encourage the efficient use of previously developed land and buildings and encourage efficient use of land.
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.
10. Achieving zero carbon living	10b) Promote and ensure high standards of sustainable resource efficient design, construction and maintenance of buildings
10. Achieving zero carbon living	10c) Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.
11. Flooding	11a) To reduce vulnerability to climatic events and flooding.
12. Historic environment	12a) Value, conserve, enhance and restore Birmingham's built and historic and archaeological environment and landscape.
13.Natural landscape	13a) Value, protect, enhance and restore Birmingham's natural landscape.

SA Topic	SA Objectives
14. Biodiversity and geodiversity	14a) To conserve and enhance biodiversity and geodiversity.
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.
15. Accessibility and transport	15b) Ensure development reduces the need to travel and reduce the negative impacts of transport on the environment
15. Accessibility and transport	15c). Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.

4.4 The aim of appraisals at this stage was to identify what the effects would be as a result of the plan proposals / options and how this compares to what might otherwise be expected to happen (i.e. the projected baseline).

4.5 At this stage the options / proposed policy changes were (necessarily) outlined in broad terms, with the intention of these becoming more refined as the LP process progressed.

4.6 Therefore, this interim appraisal considered the effects in broad terms to determine the 'potential effects' (rather than providing a detailed assessment of significance). When identifying potential effects, account was taken of a range of factors including: the magnitude of change, sensitivity of receptors, the likelihood of effects occurring, the length and permanence of effects and cumulative effects. The potential effects are classified as shown in Table 4.2 below.

Table 4-2 Scale used to record potential effects

Potential to be significantly positive	**++**
Likely to be positive	**+**
Neutral	**0**
Likely to be negative	**-**
Potential to be significantly negative	**--**
Uncertainty	**?**

5. Housing options: Summary of appraisal findings

5.1 Table 5.1 presents a visual summary of the options appraisal findings. Below is a summary of the effects for each of the Options. A more complete appraisal is presented in **Appendix B**.

5.2 It is important to point out that the options appraised are not mutually exclusive and it is likely that a combination of several or all options would be required in order to fulfil the housing growth required. As such this appraisal does not rate the options against each other but rather highlights the potential effects associated with each option.

5.3 **Option 1** (Increased housing densities) scores particularly well with likely significant positives for housing, economy and employment, and accessibility and transport as the approach would increase housing provision with less land take and increase growth in more sustainable, well-connected locations; improving accessibility services, employment and transport. Conversely, the option could potentially have significant negative effects on the historic environment due to the concentration of heritage assets in the City Centre and urban centres; making it harder to avoid impacts on the character of such locations.

5.4 **Option 2** (More active public sector land assembly) scores relatively well with respect to six of the SA topics as it would help improve housing land supply and address the housing shortfall including for affordable housing. No likely significant effects (either positive or negative) are predicted for this option but as with other options, there are some potentially negative effects on air quality, water quality, the historic environment and biodiversity due to the scale of growth urban areas. It is important to point out that effects are ultimately dependent on the locations, sizes and site-specific policies pertaining to the assembled sites and therefore there is a degree of uncertainty at this stage.

5.5 **Option 3** (Further comprehensive housing regeneration) has some mixed effects with respect to housing and equality, diversity and community development as the option is unlikely to result in a substantial net increase in dwellings and may have negative effects in the short term during the demolition and construction phases (which will reduce the housing stock including affordable housing and social rents in the interim). However, the regeneration approach is also likely to produce positive effects due to improved quality of housing, environment, open space and amenities.

5.6 Due to the overall scale of development required, negative effects are predicted for the air quality, water quality, achieving net zero living and the historic environment topics, but these are unlikely to be significant. The option is neutral with respect to the remaining topics. There is a large degree of uncertainty at this stage which would be resolved once the extent and locations of proposed regeneration sites are identified.

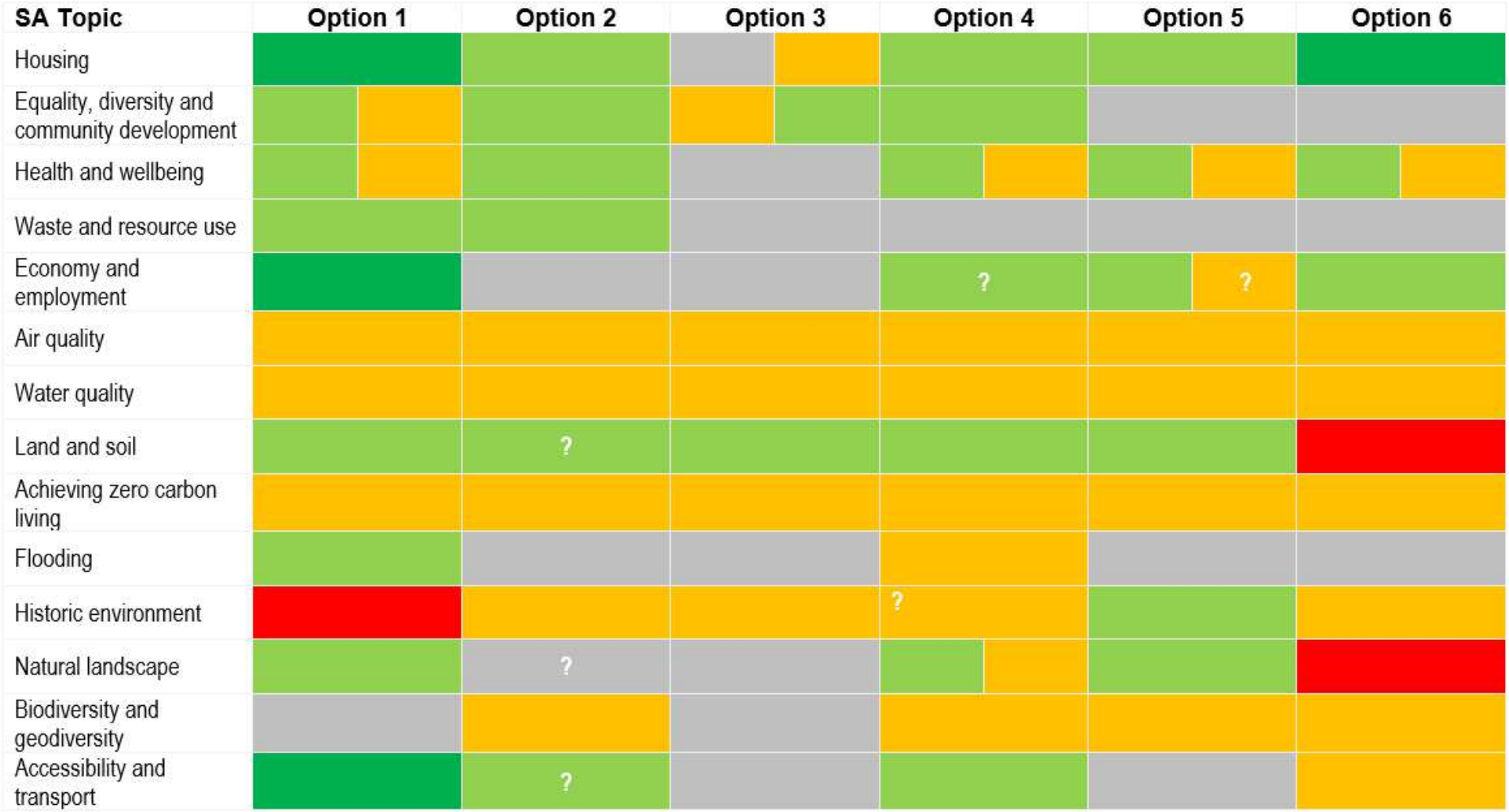
5.7 **Option 4** (Utilising poor quality under-used open space for housing) is positive with respect to housing as it would likely improve housing land supply with knock on positive effects on equality, economy and employment, land and soils (as growth is likely to reduce land take outside urban areas) and accessibility/ transport (as sites are likely to be in more accessible locations).

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)



6. Appraisal findings: Employment options

Summary of findings

6.1 Table 6.1 presents a visual summary of the options appraisal findings. Below is a summary of the effects for each of the two high level employment options identified at this stage. A more complete appraisal is presented in **Appendix C**.

6.2 There is considerable uncertainty involved in predicting the effects of the options at this level of detail. This is because effects could vary widely depending on the actual sites and locations that are involved. The appraisals at this stage should therefore be taken in this context, and as broad indications of the potential merits and drawbacks of each approach.

6.3 **Option 1** brings potential for the widest range of effects, which is to be expected given that it would involve additional land being identified for employment in Birmingham itself. However, the effects are mixed for many SA topics, as location will be important in determining whether effects are positive or negative. The most beneficial aspect of Option 1 is in terms of economy and employment, as it will deliver needs where they are arising, which is a potential significant positive effect. Provided that jobs are accessible to communities and well located, this ought to bring benefits in terms of health, equality and community development. Effects on environmental factors such as heritage, landscape, biodiversity are uncertain, but could be negative depending on the sites involved. Conversely, they could help reduce pressure on greenfield development. A balance will need to be carefully explored though, as there is also pressure to maximise the use of land for housing in the urban areas.

6.4 Addressing the shortfall in employment locally may also lead to increases in employment related traffic, which could affect air quality, and could also mean more growth in areas at risk of flooding.

6.5 Meeting the shortfall in land outside of Birmingham has some clear environmental benefits for Birmingham itself, but it is unclear what the knock on effects would be in the wider HMA. However, given that there is limited land supply in the City, and the area is already highly urbanised, a reduced pressure to address all employment needs locally could help to free land for housing and / or reduce the need to utilise sub-optimal sites. This could have subsequent knock-on benefits with regards to heritage, landscape, biodiversity, land and soil (which may otherwise be difficult to avoid). In terms of social factors though, Option 2 would be less beneficial with regards to Birmingham's economy (though would still have some positives) and could make it more difficult for less mobile members of the community to access the full range of employment on offer. These are negative effects but are only considered to be minor given that the majority of needs would still be met in the City.

Table 6-1 Summary of findings: Employment Growth Options

SA Topic	Option 1		Option 2	
Housing	?			
Equality, diversity and community development	?	?	?	
Health and wellbeing	?	?		
Waste and resource use	?		?	
Economy and employment				
Air quality	?			
Water quality				
Land and soil	?		?	
Achieving zero carbon living	?		?	
Flooding	?			
Historic environment	?	?		
Natural landscape	?	?	?	
Biodiversity and geodiversity	?	?	?	
Accessibility and transport	?	?	?	?

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 changes to adopted policy approaches) to help guide development.

7.2 It was considered useful to undertake high-level SA work at this stage to help inform further development of these policy approaches. This section presents an appraisal of the preliminary high level policy approaches outlined in the Issues and Options stage of the BLP against the SA Framework.

7.3 The high level effects were identified taking into account magnitude, duration, frequency, and likelihood. Combined, these factors have helped to identify the **likely significance** of effects, whether these are positive or negative. The policies are individually considered and appraised at this stage but are considered in their totality in combination with the spatial strategy at the next stages of the Plan and SA processes. Where policies are not mentioned under a particular SA Topic, then the assumption should be that they are of little relevance and would not give rise to effects.

Methods

7.4 The potential significance of effects is recorded according to the following scoring convention;

Potential significant positive effects
Likely positive effects
Neutral effects
Likely negative effects
Potential significant negative effects
? Indicates uncertainty

Appraisal findings

7.5 The below discussion takes each SA topic in turn and appraises the policies / policy changes proposed in the Issues and Options document, outlining the potential effects and their likely significance. The discussion below considers each policy proposal / policy change in turn and considers effects on the SA topics of relevance; i.e. those likely to be affected by the policy being appraised.

7.6 **Affordable housing:** The proposed policy changes seek to maximise affordable housing (AH) provision in Birmingham. The adopted policy (BDP policy TP31) seeks 35% AH provision on sites of 15 dwellings and over. The recent HEDNA estimates a need for 5,396 affordable rented homes per year and 1,031 dpa affordable ownership tenures. When 'existing households falling into need' i.e. those already in accommodation, is excluded from the above figure a net 'current need' of 3,049 AH per annum results. This represents 45% of the total housing need calculated in the HEDNA (using the standard method); a very substantial portion of the total growth required.

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 more AH provision. However, this will ultimately depend on viability considerations which will vary from site to site. Too rigid a requirement for greater AH contribution may make development unviable. However, this is recognized in the proposed policy change which states that the Council will *test the 35% to see if a higher contribution is viable*. Overall, the policy change is **potentially positive** with regards to housing and health and wellbeing as it is likely to maximise AH delivery without jeopardising viability. The effects on other SA topics are considered likely to be limited given that viability will need to be taken into consideration.

7.9 **Family Housing:** Seeks to safeguard family housing (use class C3) from potential loss, through conversion of larger family homes into smaller multiple units or Houses in Multiple Occupation (HMO). The Council already has a city-wide Article 4 direction relating to HMOs and HMO SPD in place. The latter identifies a higher demand in the city for 2 and 3 bed dwellings and that the proportion of households with dependent children is higher in Birmingham than regional and national averages, adding that there is a particular shortage of family accommodation. The SPD requires applicants to demonstrate that there is an established lack of demand for the single family use of the property to be converted. Whilst the guidance is helpful in reinforcing the Council's intention to safeguard family housing it may have adverse effects on AH provision as smaller dwellings in HMOs are likely to be more affordable to those most in need, particularly younger residents. Having said that the proposed policy change is not expected to significantly affect the baseline position given the existence of the above-mentioned Article 4 direction and the SPD. Therefore, **neutral effects** are envisaged at this stage for all SA topics. Site specific policies may be more effective in helping achieve an appropriate housing mix on a specific site, appropriate to its location.

7.10 **Housing for older people:** The Council is considering whether to introduce a policy that requires the provision of a specific percentage of homes for older people and explore allocating sites/ parcels within larger sites for specialist housing. Additionally, the Council may consider a policy requiring development above a certain threshold to provide a percentage (10-15%) wheelchair accessible homes. Typically, people downsize to more manageable properties as they age and there is often a significant degree of under occupation in older households. This may be out of personal choice but can often be due to lack of suitable smaller, more adaptable/ accessible homes that older residents can move into. Therefore, the proposed additions are likely to have **positive effects** on housing as they would help release larger properties back into the market and may also have positive effects on affordable housing as smaller dwellings/ older people development schemes are generally more affordable than larger homes. There are also likely to be **positive effects** on equality, diversity and community development as the schemes could engender a sense of social inclusion and reduce isolation.

7.11 **Positive effects** on health and wellbeing are also envisaged as the provision of adaptable/ accessible homes would allow older and/ or less abled residents to live in accessible (including wheelchair accessible) more suited to their needs helping them live more independently.

7.12 **Purpose built student accommodation:** The change being considered pertains to setting limits on the extent of student accommodation so as to avoid large concentrations in particular areas (e.g. in the City Centre, Selly Oak and Edgbaston).

7.13 The HEDNA identified this issue as impacting the provision of a more balanced housing mix. Selly Oak is identified as an area where a need for a higher proportion of larger homes is maybe required and where the conversion of larger homes to shared student housing may be a limiting factor. Clearly students make up a substantial proportion of the City's residents as there are five universities in Birmingham. They bring multiple benefits to the city economically and in the form of research, education and innovation. If the proposed policy additions result in limiting the provision of student accommodation this may have adverse effects as it may make the City less attractive to students. Site or area specific policies may be more effective in ensuring that new development meets local housing need, providing a mix that is appropriate to the location. Also, the aforementioned Article 4 direction and the SPD (paragraph 4.2) can also safeguard larger homes from being converted to student accommodation. Ultimately the effects will depend on the requirements of the policy to be included but at this stage, **uncertain negative effects** on housing, as policy can reduce availability of student accommodation. Similar effects are also likely pertaining to economy and employment as the universities are major contributors to the economy and employment in Birmingham and the policy could make the City less attractive to students. From a **positive perspective**, limiting student accommodation could be positive with regards to housing choice in the city, whilst also helping to maintain vibrancy in the city outside of term times.

7.14 **Built to rent:** The NPPF defines built-to-rent housing as '*purpose built housing that is typically 100% rented out. It can form part of a wider multi-tenure development comprising either flats or houses but should be on the same site and/or contiguous with the main development".* Such schemes are likely to help meet some of the demand for private rents thus helping increase housing supply and improving choice in the market. The HEDNA identifies several recently implemented built-to-rent schemes in Birmingham and highlights the important contributions such schemes make to housing supply and choice. Therefore, the inclusion of a policy seeking the provision of built-to-rent developments maybe helpful, but such schemes are already being implemented in the City even though there is not a currently adopted policy promoting built-to-rent. Therefore, only **minor positive effects** are likely with regards to housing.

7.15 **Large-scale shared accommodation:** This considers including a policy on co-living schemes. In this form of accommodation, residents rent a room within a purpose-built (or converted) development which has shared amenities and facilities. Other services and facilities are often provided including cleaning, gyms, communal workspaces and a concierge. This type of accommodation is likely to be beneficial in reducing land supply required (as it is often higher density than traditional dwellings) can provide an alternative to traditional flat or house shares which may help address some of the housing shortfall in the City.

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 a policy on co-living housing, noting a demonstrable market for such developments, particularly in student concentrations with the City Centre, southern Edgbaston and Selly Oak.

7.18 The proposed policy addition is therefore likely to produce **positive effects** on housing through increased provision and reduced land requirements due to the higher densities such schemes produce. Potentially **positive effects** are also envisaged on health and wellbeing and equality, diversity and community as the communal living aspect (through shared facilities) may help reduce isolation and engender a sense of community and belonging and may help provide better quality affordable accommodation.

7.19 **Gypsies, travellers and travelling show people:** This considers the option of including a policy allocating at least 5 years supply of sites required as demonstrated by the latest assessed needs. The Council has a pressing need to provide transit sites to cope with the increasing occurrence of unauthorised encampments. This has led to the 2 BDP allocated sites being utilised as transit sites. The HEDNA estimates a need for 30 pitches up to 2042. Therefore, the proposed policy addition could help ensure adequate provision for the Gypsy/ Traveller community's needs in future. This is predicted to have **likely significant positive effects** on health and wellbeing as currently the community has significantly shorter life expectancies, 10-15 years, shorter than the general population (HEDNA). The provision of healthy, safe sites can help improve the community's health and wellbeing it is also likely to improve the health and wellbeing of other residents who may be negatively impacted by the ad-hoc encampments. There could also be positive effects with regards to equality and diversity. The choice of sites will determine other possible effects such as accessibility, environmental impacts and so on. At this stage though, uncertain effects are recorded.

7.20 **Healthy neighbourhoods:** Considers adding a requirement in policy that all developments above a certain threshold be subject to a Health Impact Assessment (HIA). This is likely to be **positive** on health and wellbeing as it will help identify early on in the planning process the proposal's potential positives and negatives on health and wellbeing thus offering the opportunity to maximise positives and reduce or eliminate negatives. This requirement is unlikely to lead to any significant negative effects with regards to development.

7.21 **Climate change:** The proposed policy changes consider setting higher energy efficiency standards for new development and incorporating renewable energy and/ or connection to a heat network. The proposed changes require policies to consider the whole life carbon associated with proposals seeking to *'get as close to zero-carbon onsite'*. These more rigorous requirements in the form of policy are likely to have **significant positive effects** on the achieving zero carbon living SA topic as it is likely to result in more energy efficient developments and facilitate renewable energy and low carbon district heating schemes.

7.22 However, the requirement may be too onerous for developers with negative implications on viability due to the initial costs involved which will also impact AH provision. Therefore, mixed effects are predicted at this stage: likely significant positives effects on achieving zero carbon living and potentially **negative effects** on housing due to the potential viability issues raised.

7.23 **Sustainable design and construction:** Considers the development of policy to improve the resilience of new development to the effects of climate change including minimising internal heat gain to reduce the impact of the urban heat island effect and addressing water shortage by specifying higher water efficiency standards than currently specified in the building regulations.

7.24 The proposed changes include reducing the threshold above which non-residential developments aim for achieving BREEAM standard Excellent. Again, mixed effects are possible: **Positive effects** on health and wellbeing, as there would be a requirement to reduce the impact of urban heat island effects which can have serious health implications particularly for the youngest and oldest residents and those with chronic health conditions. **Positive effects** are also likely on the waste and resource use topic as the higher water efficiency requirements will help conserve water resources into the future. The proposed changes also highlight the need to address surface water flood risk which is also beneficial, as it may help reduce flood risk in the future (**positive effects** on flooding). Conversely, there may be some **negative effects** on the economy and employment topic as these changes may make some employment / commercial developments less viable due to the costs involved.

7.25 **Low and zero carbon infrastructure:** The proposed changes relate to utilising heat networks (3 have been identified in the City) to provide a decarbonised source of heating and cooling to existing buildings and new development. The policy envisages Heat Network Zoning that would identify 'Energy Zones' where greater carbon reductions can be achieved. Furthermore, through policy the Council could seek to ensure that new residential/ employment schemes are provided with the infrastructure to link them into the heat networks. As above mixed effects are potentially likely; **positive effects** on the achieving zero carbon living SA objective as the policy will likely result in an overall carbon reduction but there may also be **negative effects** on viability of affected developments due to the cost implications of linking to the networks and adapting development to utilise the networks. There could also be some short term disruptions with regards to infrastructure works (e.g. congestion, noise etc), which could be **negative** for health and wellbeing.

7.26 **Flood risk and water management:** Considers including a policy seeking to reduce flood risk from all sources. This is to be achieved by directing development away from areas at highest risk of flooding such that they are safe for their lifetime without increasing flood risk elsewhere. New policy could also emphasise the need to attenuate and use storm water for irrigation for example. The policies are likely to have **positive effects** on health and wellbeing as they will reduce the impacts of future flood events on residents with **positive effects** on flooding as the policy will help reduce the impact of flood events by directing development to areas at lower risk of flooding.

7.27 **Sustainable waste management:** Considers strengthening policy to ensure that the reduce/ reuse/ recycle approach to solid waste and resource management is implemented as a part of new development.

7.28 This would include applying circular economy principles to new buildings and extending the useful life of buildings including salvaging building materials for reuse. This is likely to have **positive effects** on carbon emissions (achieving zero carbon living) and the waste and resource use SA objectives as it will help recycle embedded carbon in buildings and construction materials.

7.29 Further beneficial effects are possible due to the inclusion of a requirement that major developments provide onsite recycling such as composting and suitable waste disposal to reduce landfill.

7.30 **Green infrastructure:** Considers including policy that seeks a more proactive approach to GI provision by protecting and enhancing the green infrastructure network using Local Nature Recovery Strategy and Birmingham's Urban Forest Master Plan. This likely to have **positive effects** on biodiversity as the planned scale of growth will inevitably lead to some loss of habitats and the biodiversity associated with them. This policy approach could help mitigate / partially offset some of resulting loss and fragmentation reducing the overall magnitude of negative effects.

7.31 **Biodiversity net gain:** Proposes to explore going above the mandatory 10% biodiversity net gain e.g. 20%. Again, this is likely to have **positive effects** on biodiversity, potentially mitigate/ partially offset any resulting loss and fragmentation predicted as a result of new development. Conversely, this may place an added burden on new development in terms of space required and costs which may **negatively** impact viability and consequently housing delivery.

7.32 **Urban greening:** Proposes to include policy changes to strengthen the urban greening approach ensuring that major developments include urban greening as part of their design. This may also include an Urban Greening Factor to identify the amount of urban greening required in new developments. Again, this is likely to have beneficial (**positive**) effects on biodiversity, potentially helping mitigate some of the loss due to the scale of new development. There could also be knock on benefits with regards to health and wellbeing and climate change resilience. As discussed above this may also have negative implications on viability of new development with potentially **negative effects** on the provision of housing.

7.33 **Open space and playing fields:** Considers introducing a policy requiring new open space standards to be applied. This will increase the requirement from 2ha per 1000 persons to 2.35 ha/ 1000 persons. Introducing the new standard would imply a 17.5% increase of provision of open / recreational space in new development. Open space is currently underprovided in the City and therefore this policy approach is likely to have **positive effects** on health and wellbeing due to the additional open and recreational space. The additional provision can also have beneficial effects on biodiversity potentially reducing fragmentation and providing spaces that serve as stepping stones for species. **Positive effects** are also likely on the equality, diversity and community development topic due to the enhanced provision and improved access to open space and recreational space. Conversely, some potential **negative effects** are possible on the housing topic as the increased open space provision may impact housing land supply.

7.34 **Minimising environmental pollution:** No policy changes are proposed therefore it is not possible to predict effects at this stage.

7.35 **Tall buildings:** Considers whether to introduce a tall buildings policy that indicates appropriate locations and design. Effects would depend on the wording of the policy which are yet to be formulated.

7.36 **Portfolio of employment land:** This proposes a policy change to revise the employment land portfolio in order to continue providing an ongoing 5-year supply of readily available employment land with a reduced target of 67 ha as evidenced by the recent HEDNA**.** The new portfolio will focus on delivering small-medium sized sites. This is likely to have **positive effects** on the economy and employment topic as it will help ensure the council meets future demand for sites.

7.37 The HEDNA identified an unmet demand for small/ medium sites and this policy would help address this need. Effects upon other factors would be dependent on the choice of sites.

7.38 **Regional Investment Sites:** proposes removing the designation of Regional Investment Sites (term inherited from the revoked West Midlands Regional Spatial Strategy) and maintaining their designation as Core Employment Areas. If deemed appropriate within the Growth Options to continue with the Regional Investment Sites designation, then developments in these locations will need to be restricted to B2 uses only due to the government's changes to the Use Classes Order. This change in designation is unlikely to produce significant effects on employment as it unlikely to produce a substantial increase or reduction in employment land.

7.39 **Core Employment Areas:** Considers introducing a policy that redefines the Core Employment Areas boundaries according to the findings of the HEDNA. The majority of areas making up the CEAs will remain as they are, but some will be retained with amended boundaries to reflect current distribution of uses and where further development potential exists, and some will be de-designated as they no longer contain predominantly employment uses. Furthermore, the policy will require exceptional justification for non-employment uses in CEAs. Whilst this is likely to have **positive effects** on economy and employment as it safeguards existing employment land in these well connected locations but it may adversely impact growth options seeking to introduce some residential/ mixed uses into CEAs thereby **negatively** impacting housing land supply and housing delivery.

7.40 **Protection of employment land:** Seeks to introduce greater flexibility in re purposing non-conforming employment sites (ones in predominantly residential areas) outside the CEAs for residential use. This would include measures to ensure that sites which are capable of providing a valued contribution to employment and economy are not lost, including viability assessments. The proposed policy approach is likely to be **positive** with respect to housing as it would help improve housing land supply and housing provision. Potential negative effects on employment land are unlikely given the proposed policy requirements that valuable employment land is not lost. Overall, positive effects are predicted on the housing topic with knock on **positive effects** on health and wellbeing (due to improved housing provision, choice and potentially affordability).

7.41 **Offices:** Proposes not to include a detailed policy to guide future office development, opting for a broader policy setting out locations for development under Use Class E. The post Covid-19 pandemic increase in homeworking and hybrid working will mean there could be less need for office floorspace supply. The HEDNA also reduced the projected office floorspace needs by 30% up to 2042.

7.42 This is unlikely to have significant effects (**neutral**) as the changes in Use Classes Order mean offices are in the same class as other commercial uses (retail and food and drink) and the introduction of new Permitted development rights would enable the conversion of class E buildings to residential dwellings without requiring a planning application.

7.43 **Urban centres:** This states the council intention to review the centre hierarchy and boundaries seeking to designate new centres and possibly amend some existing centre boundaries.

7.44 The policy would also remove the requirement for 50%/55% of uses in centres to be retained for retail use. The approach taken will be informed by the Retail and Leisure Needs Assessment. The proposed policies are potentially **positive** on economy and employment as they will help reduce empty shops in town centres and repurpose empty spaces above shops to various uses including as affordable workspaces promoting local enterprises, offices and homes. This is likely to improve the vitality of centres and attract more footfall producing positive effects on the local economy and employment. There may also be **positive** effects on housing through the conversion of empty premises or above ground floor spaces into residential accommodation. There are potential positive and negative impacts upon the character of the built environment and heritage, but these are uncertainties at this stage.

7.45 **Tourism, culture and the night-time economy:** Considers the inclusion of a policy seeking to enable evening and night-time economic activity. This may include protecting public houses, theatres, live music venues and night clubs from change of use. Other measures considered include supporting the night-time economy by better provision of evening/ night-time public transport services. The potential policy measures are likely to have **positive effects** on the local economy and employment as they are likely to improve the vitality of leisure, cultural and social venues, helping to increase visitors through the improved public transport provision. There are potential **minor negative effects** with regards to housing provision, as it prevents changes in use that may otherwise occur.

7.46 **Key growth areas - opportunity areas:** Outlines the Council's intention to identify new areas to focus growth. These new opportunity areas will be within existing urban areas, in locations that benefit from good public transport, services and cycling and walking infrastructure. They will be in areas where clusters of development opportunities exist and will be developed through a masterplanning/ area framework approaches. The proposed policy changes include more focussed growth (in size and purpose) in locations where clusters of opportunity sites / infrastructure improvement would bring about wider change in the area. Each growth area is to have a policy setting out key requirements including land, scale, density and site specific requirements. Growth areas identified would be supported by a masterplan SPD. The Council proposes to name such growth areas as 'Strategic Regeneration Areas' or 'Opportunity Areas'.

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 approach with **positive effects** predicted on housing and economy and employment in particular.

Summary

7.48 The appraisal of the proposed policy approaches and changes (to adopted policy) identified mostly positive effects with respect to the housing, health and wellbeing, economy and employment, equality, diversity and community, waste and resource use, flooding and biodiversity SA topics. **Likely significant positives** were identified with respect to the health and wellbeing, and achieving net zero carbon living, SA topics. The former is due to the addition of a policy seeking to ensure adequate provision for the Gypsy/ Traveller community's needs in future.

7.49 This community has significantly shorter life expectancies, 10-15 years shorter than the general population, therefore, the provision of healthy and safe sites can help improve the community's health and wellbeing.

7.50 Proposed policy changes considering the setting of higher energy efficiency standards, incorporating renewable energy and/ or connections to heat networks, the requirement for proposals to consider whole life carbon and seeking to 'get as close to zero-carbon onsite' are anticipated to produce **likely significant positive effects** with respect to the achieving net zero carbon living SA topic. These more rigorous requirements in the form of policy are likely to produce concrete contributions to lowering the carbon footprint associated with new development.

7.51 Some **negative effects** were predicted for the Housing and Economy and Employment SA topics due to the risk that some policies may reduce housing / employment development due to viability issues through the requirement for more rigorous energy efficiency standards, and restrictions on certain types of dwellings (HMOs, student housing). No likely significant negative effects were identified.

7.52 Table 7-1 summarises the potential effects of the proposed policy changes visually. For each policy, where effects have been identified for at least one of the SA topics, a colour is provided for specific SA topics to represent whether effects are broadly likely to be positive or negative.

7.53 For some policies, neutral effects have been identified against all the SA topics, so these are not shown in the table.

Table 7-1 Summary of findings: Proposed policy changes

Proposed Policy Changes	Potential effects				
Affordable housing	Housing	Health and wellbeing			
Housing for older people	Housing	Health and wellbeing	Equality and community		
Purpose built student accomodation	Housing	Housing			
Built-to-rent	Housing				
Large-scale shared accomodation	Housing	Health and wellbeing	Equality and community		
Gypsies, travellers and travelling showpeople	Health and wellbeing				
Healthy neighbourhoods	Health and wellbeing	Equality and community			
Climate change	Housing	Achieving zero carbon			
Sustainable design and construction	Health and wellbeing	Waste and resource use	Flooding	Economy and employment	
Low and zero carbon infrastructure	Health and wellbeing	Achieving zero carbon			
Flood risk and water management	Health and wellbeing	Water quality	Flooding		
Sustainable waste management	Achieving zero carbon	Waste and resource use			
Green infrastructure	Health and wellbeing	Water quality	Biodiversity		
Biodiversity net gain	Housing	Biodiversity			
Urban greening	Housing	Health and wellbeing	Equality and community		
Open space and playing fields	Housing	Health and wellbeing	Equality and community	Equality and community	
Portfolio of employment land	Economy and employment				
Core Employment Areas	Economy and employment	Housing			
Protection of employment land	Housing	Health and wellbeing			
Urban centres	Economy and employment	Housing	Historic environment?	Historic environment?	
Tourism, culture and the night time economy	Economy and employment	Housing			
Key growth areas-opportunity areas	Economy and employment	Housing			

Light green is a potential positive effect

Dark green is a potentially significant positive effect

Amber is a potential negative effect

8. Recommendations at Issues and Options Stage

8.1 When developing the options / policies, the following high level recommendations were proposed as a result of the interim SA findings.

- It is unlikely that any of the housing options will be capable of meeting the shortfall in housing on their own (at least not without generating significant negative effects on particular SA topics). It is therefore recommended that a mix of the options are utilised to develop a series of reasonable strategies for growth.
- Undertake sustainability appraisal of reasonable site options to help inform the development of reasonable strategies for growth.
- Support patterns of growth that will help to create 20 minute neighbourhoods.
- Ensure that new development in urban areas brings with it improvements to open space and urban greening.
- The accessibility of some Green Belt areas is poorer than the urban areas. Small scale incremental growth in such locations would likely result in increased car trips and / or poor access to services and should be avoided in such instances. Green Belt should only be released in exceptional circumstances where the locations are sustainable or can be made so, which is more likely to be achieved through a SUE.
- It will be important to ensure that increased densities, intensification and repurposing of land in the urban areas does not result in a significant increase in car travel as this could exacerbate air quality issues. The Plan should therefore seek to provide strong support for walking, cycling and public transport throughout the urban areas.
- Consider the use of poorer performing sites (in terms of sustainably located housing) for biodiversity / open space provision (linked to a Local Nature Recovery Strategy).

9. Appraisal of the Preferred Options Document

Introduction

9.1 Building upon the proposed policy approaches at issues and options stage, the Council has prepared a Preferred options document, which comprises a preferred spatial strategy and a range of supporting policies.

9.2 The document (hereafter referred to as 'the Plan') has been appraised in this section of the SA Report. The Plan has been appraised 'as a whole', taking into account the potential for effects associated with new development (primarily the new allocations and growth zones) but accounting for all of the policies within the Plan. This is important for several reasons:

- Plan policies can help to mitigate negative effects and enhance positives.
- Policies within the Plan work together and can have cumulative/ synergistic effects that need to be identified within the SA.
- Whilst all the policies have been considered individually, their effects are discussed in overall terms, rather than on a policy-by-policy basis. However, references have been made to specific policies where it is considered that they make a particular contribution to the SA topics.

9.3 In determining the significance of effects, professional judgement has been applied, being mindful of key effect characteristics including: magnitude, likelihood, duration, timeframe and cumulative effects. A range of information sources have been utilised to inform judgements:

- Geographical Information Systems data (which sets out a high level appraisal of each reasonable site option).
- Inputs from technical studies.
- Reference to the Scoping Report and Interim SA Reports.

9.4 Whilst every effort is taken to predict effects accurately, there is a degree of uncertainty that must be acknowledged given the strategic nature of the appraisal. In particular, the level of detail is less granular with regards to specific on-site characteristics, so there is a reliance on higher level datasets (for example; the presence of designated environmental assets).

9.5 It is important to ensure a consistent comparison between the options. For this reason, the same high-level assumptions are made with regards to mitigation and enhancement. The policies within the Plan have been taken into account when determining the significance of effects for all reasonable alternatives considered at this stage. However, rather than taking into account specific scheme details (which may be available for some locations and not others), the appraisal identifies the baseline situation and how development could affect this.

9.6 This is not to say that such effects could not be different when mitigation and enhancement considerations are fully appreciated.

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 consider that this should continue to be addressed at a sub-regional level alongside neighbouring authorities (rather than releasing further Green Belt land through this plan review).

9.9 The preferred approach is reflective of options 1-5 (to varying extents), which were tested at issues and options stage, but there is greater information available at this stage in terms of the overall supply and location of growth. For example:

- It is estimated that increased densities will lead to an additional 8,200 dwellings (compared to the current density assumptions).
- Approximately 15,500 dwellings are proposed in land categorised as industrial / warehouse as a former use.

9.10 The Council contend that there are not exceptional circumstances for Green Belt release (Option 6). However, it is noted that there remains a considerable amount of unmet housing need, and several consultees have expressed support for a strategy that includes a mix of both urban intensification and partial Green Belt release in sustainable locations. There is therefore support for an alternative strategy that utilises a greater amount of Green Belt land rather than relying entirely on urban intensification (through a variety of means).

9.11 The assumption is that Green Belt release would be in addition to urban intensification. The Council has already factored in the potential for non-implementation on HELAA sites and is confident of delivering the proposed preferred strategy. Therefore, the only feasible alternative is one where Green Belt is released in addition to urban growth, thereby increasing the overall level of housing delivery over the plan period.

9.12 The call for sites led to a range of Green Belt sites being proposed, with a total proposed capacity of approximately 8,000 dwellings (though some of the submitted sites are duplicates and overlap with other sites). However, it is considered unreasonable to release all proposed sites, as this would leave very little Green Belt land in Birmingham and there may be more appropriate locations across the City Region where unmet housing need could be accommodated (the Council believes that the significant scale of unmet needs means that it would be best dealt with through collaboration with the other Local Authorities in the housing market areas). These matters were discussed at length at the Examination in Public for the adopted Birmingham Development Plan.

9.13 In light of the above, the alternative assessed in this SA makes an assumption that up to 5,000 additional dwellings could be delivered through Green Belt release. It is presumed that new developments in the Green Belt would need to be supported by sufficient infrastructure, and a concentration of growth around this scale would support the delivery of necessary social infrastructure (and potentially transport improvements).

9.14 Given that the Council consider that Green Belt release is unnecessary, it would be premature to suggest the exact sites that would be involved under this alternative. However, previous SA work for the adopted Birmingham Development Plan and the recent call for sites submissions gives an indication of the broad locations that could be involved (see figure 9.1 below). The focus of growth would most likely be to the north of Birmingham where there are several sites that could deliver strategic growth (and this has been the focus of the appraisal). Though there are some smaller sites scattered across the urban area, these are relatively small scale and would not on their own deliver significant infrastructure enhancements. There is also a broad location to the south of the urban area at Kings Norton South, but this partially overlaps with Bromsgrove District and should ideally be considered holistically.

Supply element	The draft Plan	Reasonable alternative 1
'Committed growth'[3]	38,029	38,209
Allocation in adopted Plan and still appropriate	6,784	6,784
Allocation in draft plan	30,104	30,104
Other opportunities	11,841	11,841
12% lapse rate (applied to outline consents and other opportunities)	-2,024	-2,024
Windfall allowance	8,575	8,575
Completions	9,718	9,718
Greenbelt	0	Up to 5,000
Total	103,027	108,027

[3] This includes under construction, detailed and outline planning permission, permitted development and permission in principle.

Employment

9.15 The Council proposes to meet identified industrial development needs without requiring further development opportunities in the Green Belt or in neighbouring local authority areas. The HEDNA recommends that an ongoing 5 year reservoir of industrial land is maintained, which continues the approach in the Adopted Plan (which did not set a target for identifying land needs over the full plan period).

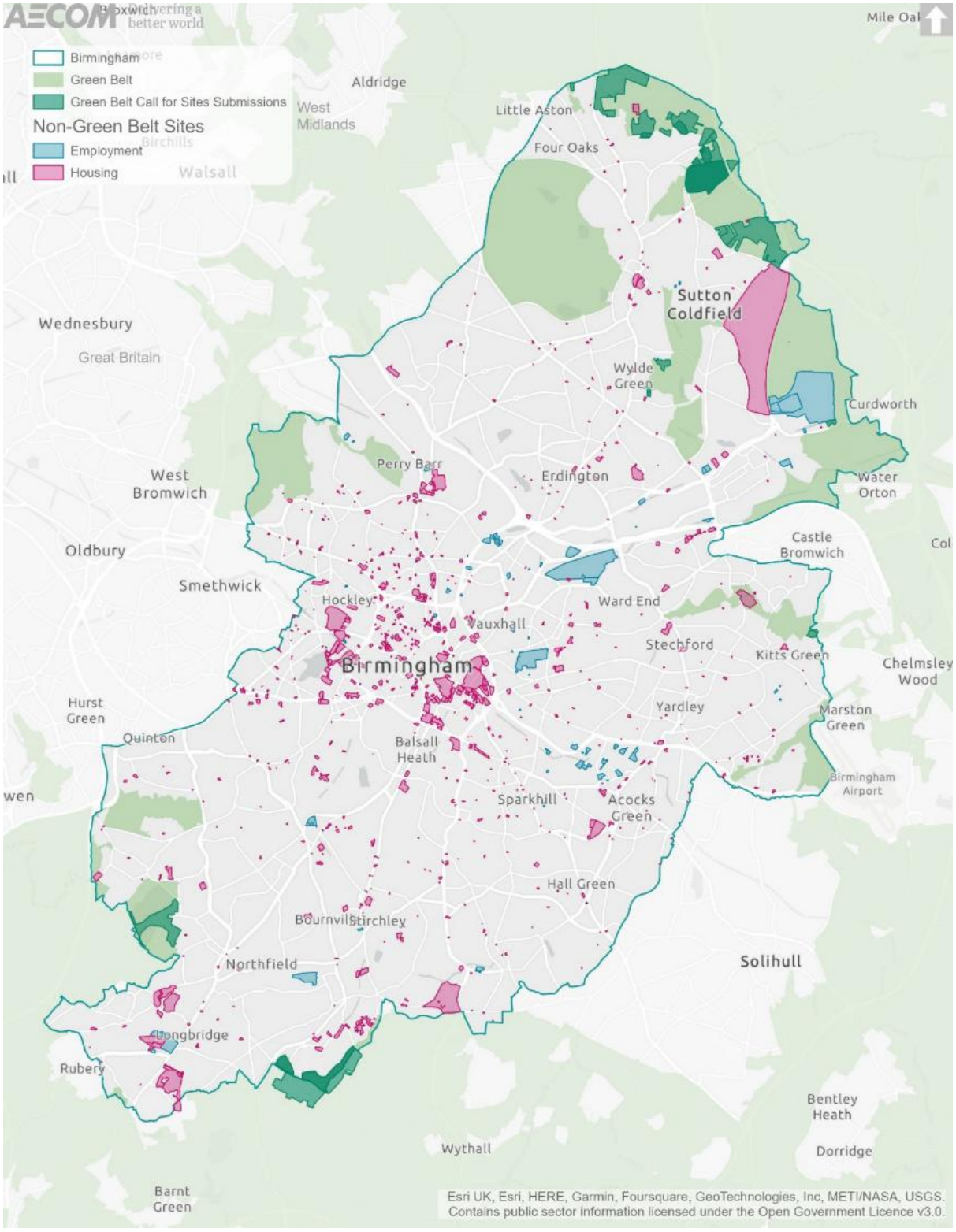
9.16 At the current stage, the Council proposes to meet 'employment needs' identified by the HEDNA through the following strategy.

- Relying upon current planning approvals, allocations and past completions to provide a significant amount of employment land across the plan period.
- Refocus the Core Employment Areas designation on B2 and B8 uses and rename them as Core Industrial Areas. Recognise the potential for additional supply as identified in the Urban Capacity Study.
- Relying upon 53ha of land available in South Staffordshire at the West Midlands Strategic Rail Freight Interchange.

9.17 The council has reconsidered at this stage whether there are any reasonable alternative approaches to the provision of employment land.

9.18 One approach would be to release Green Belt to provide alternative (or additional) sources of land for employment development. The Council considers that it is not reasonable to plan for a higher amount of land supply than identified in the HEDNA. There is no evidence that this is necessary, and it would likely require Green Belt locations, for which there are no exceptional circumstances to justify their release. The Core Employment Areas are appropriate locations for growth, and it is considered unreasonable to direct growth away from these considering that there is identified capacity for further development.

Figure 9.1 Housing and employment land supply (including submitted Green Belt land).



The Plan Policies

Policy PG1: Overall levels of growth
Policy PG2: Birmingham as an International City
Policy PG3: Place Making
Policy PG4: Central Birmingham
Policies GZ1 – GZ25: Growth Zone Policies
Policy GA5: Langley Sustainable Urban Extension
Policy GA6 : Peddimore
Policy SA1: Site Allocations
Policy HN1: New residential development
Policy HN2: Affordable Housing
Policy HN3: Housing type and size mix
Policy HN4: Residential densities
Policy HN5: Housing for older people and others with support needs and care
Policy HN6: Protecting existing housing
Policy HN7: Purpose built student accommodation
Policy HN8: Large scale shared accommodation
Policy HN9: Housing regeneration
Policy HN10: Gypsies, Travellers and Travelling Showpeople
Policy HN11: Educational facilities
Policy HN12: Healthy neighbourhoods
Policy CE1: Climate change
Policy CE2: Sustainable design and construction
Policy CE3: Whole Life-Cycle Carbon
Policy CE4: Retrofitting existing buildings
Policy CE5: Renewable energy networks and shared energy schemes
Policy CE6: Reducing operational emissions
Policy CE7: Flood risk management
Policy CE8: Sustainable resource management
Policy CE9: Green infrastructure and nature recovery
Policy CE10: Biodiversity and geodiversity
Policy CE11: Biodiversity net gain
Policy CE12: Urban greening factor
Policy CE13: Open space
Policy CE14: Playing pitches and sports facilities
Policy CE15: Green Belt
Policy CE16: Historic environment
Policy CE17: The canal network
Policy CE18: Minerals
Policy EC1: Industrial land provision
Policy EC2: Core Industrial Areas
Policy EC3: Protection of other industrial land
Policy EC4: Urban Centres
Policy EC5: Evening and night time economy
Policy EC6: Tourism and cultural facilities
Policy EC7: Social value
Policy CY1: Sustainable transport
Policy CY2: Active travel
Policy CY3: Public transport
Policy CY4: Freight
Policy CY5: Network Management
Policy CY6: Digital connectivity
Policy IM1: Developer contributions and Community Infrastructure Levy
Policy IM2: Monitoring and Review

SA Topic 1: Housing

Appraisal of the draft Plan

9.19 One of the key issues emerging in relation to housing is a supply and demand imbalance, with the forecasted housing needs (demand) exceeding the current available supply of land within the city. BCC has, throughout plan development, sought to boost this supply where possible, but the current plan still indicates a housing shortfall of 36,435 dwellings, placing a reliance on housing delivery in neighbouring areas (in excess of meeting their own needs).

9.20 Options for meeting this shortfall have been tested through SA work to date and presented to the public at consultation. Following on from this some key choices have been made which has managed to reduce this shortfall from 78,416 (at the issues and options stage) to the current figure. These choices include:

- Significantly increasing the density of development within the city centre (from 100 dwellings per hectare to 400 dwellings per hectare) supported by a smaller increase in the density of new development in and around Local Centres (from 50 to 70 dwellings per hectare) (Policy HN4).
- Identifying key opportunity areas for continued housing estate regeneration and renewal, including 14 Housing Action Areas (Policy HN9).
- The partial redevelopment of four poor quality open spaces (Moilliett Street Park, North Edgbaston; Spring Hill, Ladywood informal greenspace; St Marks, Ladywood park and recreation ground; and Gib Heath Park).
- The release of 120ha of employment land to be repurposed for housing development.
- Releasing more council owned city centre land for redevelopment and a continued effort to bring empty properties back into use and protect the existing housing stock.

9.21 The only remaining alternative that has been identified is the release of Green Belt land (through a Green Belt Review) to deliver more homes, which is ultimately unfavourable amongst local communities, and has sustainability implications (as identified through previous iterations of the SA). This alternative is explored further on in this section. Further density increases or open space development will not be of a strategic scale to consider as a viable alternative at this stage, furthermore, the release of open space to housing development is not favoured locally and counterintuitive to many sustainability objectives.

9.22 In relation to the current proposed strategy, a concern is the need to accommodate families and larger homes in areas of significantly high densities, but Policy HN3 seeks to ensure an appropriate housing mix, which should help to reduce these concerns. Several of the growth zone policies also stipulate that there is an aim to create modern, sustainable family housing and to deliver a diverse range of new homes. Family homes will also be a key feature of the Langley Sustainable Urban Extension.

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 central 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 **long-term negative effects** should this housing need not be met elsewhere, and this could particularly exacerbate existing issues such as rising homelessness and increasing affordability issues. This somewhat reduces the positive effects and so **moderate positive effects** are predicted overall.

Appraisal of alternatives

9.28 At this stage, based on the broad locations / sites that have been identified as reasonable, further Green Belt release will not be of a sufficient scale to address the housing shortfall in its entirety, and unmet needs are still likely to exist. Despite this, further Green Belt release would ultimately reduce the level of uncertainty associated with delivery, and reduce the reliance placed on unmet needs being delivered in the wider HMA.

9.29 It will deliver more homes, including more affordable homes and more family homes, within the city boundary, and also has greater potential to deliver a wider range of homes both in terms of size and location. On this basis, the alternative has the potential to **enhance positive effects and reduce uncertainties** in relation to housing objectives. Overall, **major positive effects** are predicted.

SA Topic 2: Equality, diversity, and community development

Appraisal of the draft Plan

9.30 The growth strategy of the draft plan focuses a significant amount of future development within the city centre and most accessible areas of the city. In particular, a significant increase in city centre densities should enable more people to live in an area which significantly reduces the need to travel (linking them with services, facilities, and employment opportunities) and provides accessible sustainable transport connections. This is supported by a high rate of affordable housing delivery (35% in schemes of ten or more homes – Policy HN2) and continued employment and economic development that will meet the employment land needs identified through the HEDNA.

9.31 These factors ultimately support the efforts to reduce deprivation across the city, for which the most acute problems are largely found centrally and relate to the 'income', 'living environment', 'barriers to housing and services', and 'employment' domains. This will be particularly beneficial for more vulnerable groups, with notable additional policy measures to; deliver built environment enhancements that support the elderly and disabled (e.g., Policy HN5), deliver against the needs of minority groups (e.g., Gypsies, Travellers, and Travelling Showpeople – Policy HN10), and ensure suitable access to schools and early years provisions to support the young (Policy HN11). Furthermore, in the case of increased densities it will be important to ensure adequate provisions for families and children. In this respect, Policies HN2 and HN3 seek to ensure access to affordable housing of the right size and type, supported by access to open spaces, parks, play and sports provisions (Policies CE13 and CE14).

9.32 Increasing densities should help communities to grow local community groups and active participation opportunities, and support inclusiveness in this respect. In addition, the increased densities should support communities through higher levels of natural surveillance that in turn reduce both crime and the fear of crime. This is supported by place-making principles (Policy PG3) and standards for healthy neighbourhoods (Policy HN12) which seek to improve safety, design out crime, and encourage social interaction in new development.

9.33 The Plan seeks to achieve regeneration and renewal in multiple locations that overlap with deprived communities, which in some instances also overlap with ethnic minority communities. Where this involves the repurposing of employment land, this presents the opportunity to create new high quality communities that are well served by a range of facilities. This should have positive effects upon communities and help to reduce inequalities. Where there are plans to regenerate existing housing estates, there could be mixed effects.

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 effects on wellbeing and life chances. However, in some of the renewal areas, there has been concern from existing residents that regeneration activities could potentially have detrimental effects by splitting up existing communities, a loss of identify, and displacing residents permanently (especially those that are renting). This poses a risk of gentrification in some locations and needs to be managed to ensure negative effects are avoided.

9.35 There are measures in the Plan that seek to ensure that communities are not affected negatively by regeneration and renewal schemes, for example:

- The need for masterplanning to ensure that existing communities benefit from developments and are involved in design and scheme details.
- The need for new development to achieve social value (Policy EC7).
- CE16 recognises the importance of the City's diverse places of worship and seeks to protect and enhance such assets.

9.36 The continued regeneration and investment into the urban areas of Birmingham and the need to deliver mixed-use communities with an appropriate mix of affordable homes should help to support the diversity of Birmingham.

9.37 Despite these measures, the potential for negative effects on some residents and communities should be acknowledged (both temporary and permanent). It is possible that the affordability of homes will decrease, making it more difficult for less affluent groups to live in these locations, and it could drive out certain minorities if community ties are broken. Overall, the potential for minor negative effects is concluded in this respect, though this is uncertain. As mentioned above, there are plan measures seeking to implement affordable homes, and to consult with communities to ensure that such effects are minimised.

9.38 It is also worth noting that there is a significant shortfall in housing supply that will need to be met in the wider Birmingham HMA. If this is not sufficiently met, there is the potential to exacerbate existing inequalities, including affordability issues. It also remains uncertain whether growth outside of the city boundaries will be able to continue the strategy for highly accessible and connected development that currently supports the city in efforts to reduce inequalities.

9.39 Much development is taking place in the central area which suffers from poor air quality linked to traffic emissions. This ultimately affects residents and can disproportionately affect more vulnerable groups. This is in some way reflected by the high levels of deprivation in relation to the 'living environment' domain. Notably, the strategy for accessible development seeks to reduce reliance on private vehicles which in turn should support improved air quality in the central area. This is also supported by Policy CY1 which seeks improved access to sustainable transport options, and improvements to the road network, as well as Policy CE9 which seeks to extend and improve green infrastructure networks (which in turn support air quality objectives) and Policy HN12 which recognises improving air quality as a key aspect for planning for healthy neighbourhoods.

9.40 Overall, the growth strategy focuses housing and employment development and regeneration in the most accessible areas of the city, connecting new residents with services, facilities, employment opportunities, sustainable transport options, and recreational opportunities. In this respect the growth strategy contributes towards efforts to reduce inequalities. This is supported by the policy framework which seeks to ensure the needs of different groups, including groups with protected characteristics, are met, and the built and natural environment is enhanced in ways which support cohesion, resident health, and healthy lifestyles. On this basis, the potential for **major positive effects** is identified. However, **uncertainties remain** given the identified and significant shortfall in the housing supply, which has not been secured in the wider HMA at this stage.

9.41 There is also potential for some communities to be displaced by renewal schemes, despite the plan seeking to minimise such effects.

9.42 Taking a precautionary approach, there is ultimately the potential for **long-term moderate negative effects** should housing need not be met elsewhere, given this could exacerbate inequalities and increase problems associated with affordability. Furthermore, it is uncertain at this stage whether wider growth in the surrounding HMA will deliver the same strategy of highly accessible and connected development. Potential negative effects with regards to community cohesion and gentrification are noted, but these are considered to be only minor given that the plan seeks to ensure that communities are engaged and that a suitable mix of affordable housing is incorporated into development.

Appraisal of alternatives

9.43 The alternative predominantly relates to the spatial strategy rather than policy framework, with the only reasonable alternative at this stage identified as additional Green Belt release to accommodate more housing growth. Whilst this would ultimately reduce uncertainties in relation to unmet needs, it will also promote growth in less accessible and less connected areas of the city, largely at its northern boundary, which also coincides with some of the least deprived areas of the city. Effects of further Green Belt release are therefore unlikely to be significant in relation to inequalities and have the potential to exacerbate inequalities to a minor degree by undermining the efforts to ensure all future development is highly accessible and connected. There is also a possibility that the release of Green Belt land could slow down or reduce investment in the planned regeneration of brownfield sites in the inner urban locations (which would be more likely to help address inequalities on balance). Conversely, there could be an opportunity to utilise viable Green Belt sites to help provide investment in the release of more problematic brownfield sites. The overall amount of housing delivery would also go further towards meeting unmet needs and would be less likely to displace residents. Therefore, overall, the alternative would be likely to generate mixed effects; with **major positive effects** anticipated alongside **minor negative effects**.

SA Topic 3: Health and wellbeing

Appraisal of the draft Plan

9.44 The spatial strategy targets housing growth at the most accessible and well-connected areas of the city, connecting future residents with services, facilities, employment and recreational opportunities. This includes significant density increases within the city centre, as well as targeted efforts to develop more council owned city centre sites, and regenerate existing housing estates. This is alongside the identification of employment land for development to meet the economic needs outlined by the HEDNA. In this respect, the spatial strategy provides a solid foundation to support residents with good access to existing health services, active travel opportunities, and recreational opportunities. This can ultimately support healthy lifestyle choices (tackling the recognised high levels of obesity and physical inactivity found in the city) and reduce health inequalities.

9.45 With regards to employment opportunities, the Plan seeks to supply an appropriate amount of land to support economic growth in key sectors and this is directed to locations that are accessible to deprived communities. Indeed, a key aim of the Plan is to focus on 'levelling-up economically disadvantaged communities' and this ought to help improve life chances, and ultimately help to reduce health inequalities across the City.

9.46 Part of the spatial strategy includes the partial redevelopment of four existing open spaces. This will not result in the complete loss of these areas, and the supporting policy framework seeks to ensure that the quality of the remaining open spaces is improved as a result of this development. This 'trade-off' is not considered likely to lead to significant effects.

9.47 The spatial strategy is supported by the policy framework, in particular Policy HN12 which sets design standards for development that seek to reduce health inequalities, increase life expectancy, and improve the quality of life, and Policy PG3 which provides place-making principles, including those that seek to improve safety and reduce crime and the fear of crime. Given the significant density increases, it will be important to ensure that healthcare facilities are able to accommodate, and grow as necessary to support, the increased population. Policy HN12 identifies the need to assess health impacts arising from new developments, ensure adequate social infrastructure provisions, and deliver new and improved services in accessible locations.

9.48 Of the additional sites identified for growth in the HELAA (and being promoted through the strategy) over 30% are within 800m of a natural green space and 90% are within 800m of a park or garden. There is also relatively good access to public and private playing fields, public open space and other recreational facilities. This ought to ensure that the population is able to benefit from opportunities for recreation. This is further supported by efforts to extend and enhance green infrastructure networks (Policy CE9), improve access to nature, parks, and open spaces (Policies CE12, CE14), and deliver enhanced urban greening measures (Policy CE12), recognising that access to nature and recreational opportunities support healthy lifestyles.

9.49 Fuel poverty is also a significant concern within Birmingham, acutely affecting lower income households who reside in older homes that are problematic (and expensive) to heat. This is an increasing health concern for residents that is being addressed predominantly through design requirements (ensuring high levels of energy efficiency in new development) and ensuring connected development that provides residents with local, accessible employment opportunities and affordable housing options (to tackle low incomes).

9.50 In addition to policy CE5, which encourages efficiency when retrofitting buildings, Policy HN9 and several growth zone policies also reinforce the need to improve energy performance of homes through retrofit programmes and new development. In this respect the plan performs positively and should complement actions to support those residents most acutely affected by fuel poverty (which ultimately will lead to improved health and wellbeing).

9.51 Additionally, most development is taking place in the central area which suffers from poor air quality linked to traffic emissions. This ultimately affects resident health, particularly in more vulnerable groups such as the young and elderly. Notably, the strategy for accessible development seeks to reduce reliance on private vehicles which in turn should support improved air quality in the central area. This is also supported by Policy CY1 which seeks improved access to sustainable transport options, and improvements to the road network, as well as Policy CE9 which seeks to extend and improve green infrastructure networks (which in turn support air quality objectives) and Policy HN12 which recognises improving air quality as a key aspect for planning for healthy neighbourhoods.

9.52 Wider plan policies which seek to raise Birmingham's profile as an International City (Policy PG2), move towards net zero and improve climate resilience (Policy CE1), improve flood risk (Policy CE7), increase biodiversity (Policy CE9, CE10, CE11), protect the historic environment and local character (Policy CE16), and deliver new jobs, new open spaces, improved active travel opportunities, new services and facilities, and wider economic growth (including retail and tourism growth) will also contribute to wider determinants of health and deliver positive effects in this respect.

9.53 With regards to healthcare facilities, the Plan acknowledges that development should contribute funding towards new and enhanced facilities. In some locations, the need for facilities is specified, for example:

- Growth Zone Policy GZ10 mentions the need for new healthcare facilities to support residential development in the Rea Valley Urban Quarter.
- The vision for Growth Zone GZ6 is to explore opportunities for continued health care provision in and around Birmingham Children's Hospital.
- Growth Zone Policy GZ18 recognises that the Queen Elizabeth Hospital and Health Campus will remain a major focus for medical facilities and supports opportunities for expansion.
- Growth Zone Policy GZ11 sets out the requirement for new health care facilities to meet the significant growth in new homes as part of the Ladywood Regeneration Initiative.

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 resource use

Appraisal of the draft Plan

9.57 The proposed spatial strategy of the plan places strong emphasis on both urban intensification and regeneration to meet housing needs (with significant increases in city centre densities, targeted release of council owned city centre sites, and estate renewal schemes), making the most of brownfield land opportunities and performing positively in respect of efficient land use. The estate regeneration plans (Policy HN9) and continued council efforts to bring empty homes back into use (Policy HN6) should also contribute to improving the sustainability performance of the existing housing stock and reducing the embodied energy / resources required for new buildings and associated infrastructure.

9.58 Coupled with this strong emphasis on brownfield development, Policy CE3 identifies a presumption against demolition of buildings and structures with the aim of increasing the reuse and repurposing of the established built environment. In any demolition, or in developments of five or more homes, Whole Life-Cycle (WLC) assessments are required, and development proposals are required to demonstrate a WLC approach. This means these developments will need to demonstrate how they comply with waste hierarchies, retain structures and materials, and improve use of resources. This should ultimately lead to increased resource efficiency and waste management benefits.

9.59 Policy CE1 more broadly captures all development proposals, requiring more efficient use of energy and materials, and Policy CE2 requires all development proposals to minimise use of materials and creation of waste and promote opportunities for a circular economy. Measures to contribute to a circular economy include the use of previously developed land and buildings, reuse and recycling of materials during construction and at the end of development lifetime, prioritising the use of locally sourced and/ or sustainable materials and construction techniques, and providing adequate space to encourage greater levels of re-use and recycling by residents and occupiers.

9.60 In terms of the handling of waste, part of the overall strategy (Policy PG1) is to deliver new waste facilities to increase recycling and disposal capacity and minimise the amount of waste sent to landfill. Policy CE8 outlines the parameters for sustainable waste management, including development design parameters, appropriate locations for waste treatment facilities, and expectations for new or extended facilities. Of note, the policy aligns its approach with the waste hierarchy and requires major new developments to submit a Waste Strategy Statement as part of their proposals. The Plan also identifies areas that are locationally suitable for waste treatment, which should help to ensure that waste can be managed in the City.

9.61 Policy mitigation is also provided for developments known to often lead to waste impacts locally (e.g., Gypsy and Traveller sites (Policy HN10) and hot food takeaways (Policy EC5)).

9.62 In relation to mineral resources, Policy CE18 identifies an approach to extract all workable minerals from development sites of greater than 5ha prior to development.

9.63 Whilst there are no active mineral workings in Birmingham, the policy further protects existing minerals infrastructure to ensure that minerals operations supporting the city can continue. Given this approach, any further sterilisation of mineral resources can be avoided, and no significant effects are anticipated.

9.64 Overall, the spatial strategy is deemed to perform particularly well in respect of efficient land use. Whilst there are some sites that are greenfield, it is a brownfield-led plan, supported by the policy framework which seeks high levels of efficiency, recycling, and reuse. The Local Plan seeks to align with the waste hierarchy and promotes a circular economy. Overall, **minor positive effects** are considered likely in relation to this SA topic.

Appraisal of alternatives

9.65 The alternative at this stage is identified as additional Green Belt land release to reduce the current shortfall in housing supply. This ultimately has implications for the strategy which currently performs well in respect of efficient land use. In addition to the positive effects related to urban regeneration, the alternative would lead to a large-scale loss of greenfield land (which currently forms a small percentage of the land within the city boundaries). There would be a greater requirement for materials and resources to support new development and supporting infrastructure, and there would be need to expand waste collection services. In combination, this would somewhat offset the benefits associated with regeneration and land efficiency strategies within the urban areas, and so **neutral effects** are predicted overall.

SA Topic 5: Economy and employment

Appraisal of the draft Plan

9.66 Economic plans for Birmingham are largely focused on business growth, job creation, and inward investment to support a growing resident population and strong existing economic base. The existing strategy of the Birmingham Development Plan has been successful with monitoring demonstrating an average of 10ha of new or redeveloped industrial land created each year, 129ha of new industrial land delivered within the Core Employment Areas, and a five-year supply of readily available employment land.

9.67 The overall approach of focusing industrial development within core locations, managing the loss of industrial uses outside these core areas, and maintaining a continued supply of readily available land is carried forward into the new plan. Policy EC1 outlines the strategy to maintain a continual supply of 67ha of industrial land readily available for development, to meet in full, the needs outlined by the HEDNA, and targeted at the identified Core Industrial Areas (Policy EC2). BCC has undertaken a review of Core Employment Areas, to better understand recent economic developments and changes (particularly reflecting the impacts of the pandemic) and reflect recent policy changes such as changes in the Use Classes Order. This has allowed for the release and repurposing of some land to contribute towards housing needs, without undermining the continued efforts to maintain core areas. Several Plan policies are proposed to support the spatial approach and identify areas with significant growth potential. This includes the growth zone policies, which promote mixed use developments, employment growth, new local centres and new homes. Significant opportunities are identified through GZ13 Bordesley Park, GZ16 Villa Park and Witton, GZ18 Greater Icknield Growth Zone, and GA6 Peddimore.

9.68 The Plan approach ultimately ensures continued economic development within established and connected areas of the city to support continued high levels of accessibility.

9.69 Birmingham benefits from an extensive network of centres, providing residents with good access to a range of shops, community facilities, services, leisure, and cultural opportunities, as well as sustainable transport options (including HS2). These centres will remain a focus for continued retail, leisure, and community development alongside housing to provide connected development. This will support the vitality and viability of centres and help to encourage more active travel and greater self-containment. Of note, the City Centre is recognised as an international centre, and in this respect Policy PG2 seeks to maintain and enhance Birmingham's profile and position both nationally and internationally, and as the economic capital of the West Midlands region. This should ultimately retain key industries and continue to promote inward investment, especially in light of ongoing infrastructure upgrades (HS2) enhancing connections between major cities like Birmingham and London. This will also continue to support the tourism offer and attraction, the expansion of which is permitted (as appropriate) through Policy EC6.

9.70 Further of note, higher educational institutions, such as the five main universities in Birmingham, provide an appropriately trained workforce for growth in the local economy.

9.71 The plan provides a permissive framework that allows appropriate growth in higher educational facilities to ensure this continued economic support (Policy HN11). Also of note, are the actions to link high-quality design standards, climate objectives, and sustainability goals with economic opportunities, to maximise benefits and climate resilience, and to continue investment in green infrastructure networks and urban greening to maximise the economic benefits arising from this (Policies PG3, HN12, and CE1, CE12).

9.72 Further Plan policies which support economic prosperity include those which promote the cultural and historic value of Birmingham, which can attract visitors and businesses to the City (Policy CE16), improvements to digital infrastructure (CY6).

9.73 With regards to housing delivery, a significant amount is proposed within the City, which should help to support the workforce needed for economic growth. It will place many new homes in accessible locations to jobs and create significant employment in construction in itself. However, it is recognised that there is a considerable shortfall in housing across the authority area. Failing to meet such needs could arguably offset some of the positive aspects of the Plan with regards to the economy. Not only could there be some shortage of suitable accommodation for the workforce (particularly larger homes that may attract a particular demographic), but it also limits economic activity on the peripheral parts of Birmingham.

9.74 Overall, the plan is considered likely to lead to positive effects in respect of this SA topic, particularly given the identified continual employment land supply and policy framework that supports continued economic growth across industrial areas, retail and leisure centres, and local centres to support a growing resident population and growing local workforce. A potential shortage of homes puts some doubt onto the significance of effects, and so only **moderate positives** are predicted. These uncertainties could be removed and positive effects enhanced should housing need be addressed at a sub-regional level, but this is beyond the influence of this Plan itself.

Appraisal of alternatives

9.75 With respect of the alternative identified at this stage (further Green Belt release), given that employment and economic growth needs are being met in full through the proposed strategy, no significant direct effects are considered likely in terms of employment land provision. Additional housing growth in these areas are outside of, and more distant from, core economic and employment areas, and thus residents will face lower levels of accessibility unless supported by additional economic and employment growth within the Green Belt. However, it should be acknowledged that provision of a higher amount of homes will inherently boost the economy by creating / sustaining more jobs in construction, and also by providing a wider range of accommodation to support a diverse workforce. The release of land in the Green Belt for housing may also reduce some pressures to release land that is currently used for employment uses. Overall, the alternative performs more positively compared to the draft Plan and **major positive effects** are recorded.

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 Policies CY1 CY2, CY3, and CY6 which seek to address air quality problems and further improve sustainable transport networks, particularly active travel opportunities, public transport, and modes of transport that reduce carbon emissions and improve air quality.

9.78 Several specific improvements to public transport networks are highlighted that would be positive in terms of reducing car based transport (with associated air pollution) including:

- Extending tram services and potential opening of new stops to help support growth zone development.
- Reopening passenger rail services.
- Enhancing walking and cycling routes.
- Wayfinding enhancements.
- Traffic management measures such as one-way streets.
- Greater use of low and zero-carbon modes of transport for last mile deliveries

9.79 The supporting policy framework recognises actions to improve air quality as part of planning for healthy neighbourhoods (Policy HN12), and requires appropriate assessments prior to development, including whole life cycle assessments (Policy CE4). Furthermore, the emphasis on urban greening (Policy CE12) and extended green infrastructure networks (Policy CE9) as well as the wider efforts to achieve net zero will also contribute to air quality objectives.

9.80 Several site specific requirements also mention the need to implement measures that will contribute to managing air quality including walking and cycling links and additional green infrastructure.

9.81 Despite the positive measures identified, it is important to note that a large amount of proposed growth is within the central areas of the City where monitoring data suggest that exceedances of air pollution thresholds are likely. This puts a greater amount of new homes in areas at risk of poor air quality.

9.82 Overall, the actions of the local plan provide support to the air quality action plan and contribute to improving Birmingham's air quality and move to net zero. There are notable efforts through the spatial strategy to locate future growth in the most accessible locations in the city and change the travel habits that lead to deteriorating air quality in the first place. These are positive measures, but there is a likely increase in vehicle movements and traffic as a result of continued growth, both in housing and employment development (though it should be acknowledged that this would be the case in the absence of a new plan). There is also likely to be more homes located in areas with poorer air quality, particularly in the short to medium term before measures to drive down emissions have been fully implemented. As a result, the positive elements of the Plan are considered likely to be offset, leaving **neutral effects** overall.

Appraisal of alternatives

9.83 Additional growth in the Green Belt will likely be less well-connected to existing active travel and public transport infrastructure, resulting in a higher dependency on the private car. Whilst it is recognised that development at larger sites could be accompanied by new sustainable transport infrastructure, this is unlikely to be at the same scale as that within the city centre and other established urban centres across the Plan area. There is also likely to be a greater need to travel further for work opportunities and higher order services. This would contribute to transport based emissions along routes throughout Birmingham, which could have some negative effects in the short to medium term. Due to this, the alternative has the potential to lead to residual **minor negative effects** in relation to air quality objectives, despite other positive features of the strategy still being in place. A change in behaviours and uptake of electric vehicles in the longer could mean that these effects are only temporary though.

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 improved in terms of their ability to sustainably manage surface runoff, including by utilising sustainable drainage systems (SuDS). However, it is recognised that there is potential for issues relating to infrastructure capacity, particularly given the density of development proposed – especially in the city centre. Nevertheless, this will likely be considered through statutory requirements.

9.85 Policy CE7 (Flood Risk Management) outlines that all development proposals will be required to manage surface water through SuDs. Not only will this minimise flood risk, but it will also improve water quality. The policy states that surface water runoff should be managed as close to its source as possible in line with the drainage hierarchy, the details of which are set out within the policy. Notably, all SuDS must protect and enhance water quality by reducing the risk of diffuse pollution by means of treating at source and including multiple treatment trains where feasible. Policy CE7 also highlights that opportunities to increase wildlife, amenity and sporting value of natural water features and canals will be encouraged provided that there is no adverse impact on water quality.

9.86 More broadly, Policy CE17 (The Canal Network) outlines that development proposals, including development backing onto the canals, as well as residential and commercial moorings and facilities for boaters on canals, will only be supported where they do not lead to adverse impacts on water quality. In addition, Policy CE1 (Climate Change) outlines the council's plan for increasing Birmingham's capacity for water conservation and sustainable drainage. Specifically, the policy states that new development must be accompanied by a Sustainability Statement, which must include – amongst other things – a water efficiency statement. Finally, Policy HN10 (Gypsies, Travellers and Travelling Showpeople) states that proposals for accommodation for Gypsies, Roma, Travellers and Travelling Showpeople – outside of the sites allocated through the plan – will be permitted where they meet the criteria set out within the policy. This includes the need for the site to be served by essential services such as mains water, sewerage and power and waste disposal.

9.87 It is noted that policies that aim to increase the cover of green spaces and GI across Birmingham are likely to lead to positive impacts on water quality. In this respect, Policies CE9 (Green Infrastructure and Nature Recovery Network, CE12 (Urban Greening Factor), and CE13 (Open Spaces) perform well.

9.88 Served by both Severn Trent and South Staffs, water resources in Birmingham have been planned for over the next couple decades, to meet the resident needs of a growing population within the wider catchment areas. To support future needs, Severn Trent are investing in new abstraction sources, South Staffs are investing in two existing major water treatment works and both water companies are maintaining efforts to improve water efficiency, reduce leakage, and improve monitoring.

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 To conclude, the strategy positively seeks to ensure that development incorporates appropriate water quality measures, such as the use of SuDS, and as a result, **minor positive effects** are anticipated under this SA topic. Despite this, it is recognised that infrastructure capacity could be put under strain, especially in the city centre, and in this respect an element of **uncertainty remains**.

Appraisal of alternatives

9.93 Development at broad locations / sites within the Green Belt are assumed to lead to further adverse impacts on water quality due to the loss of greenfield land on a relatively large scale (in the context of the majority of Birmingham being urbanised). This is because green spaces provide storage and interception of rainfall at the source and can reduce diffuse pollution.

9.94 Development within the Green Belt would also increase the overall need for water resources, coupled with growth in the city centre, and would likely require additional new infrastructure to manage waste water and surface water run-off. Due to this, the alternative has the potential to lead to negative effects in relation to the water quality objectives. The magnitude of effects could be tempered by green infrastructure enhancements and natural drainage systems being secured as part of new development in the Green Belt. Larger scale strategic developments may also offer good opportunities to take a catchment based natural drainage approach to managing water, which ought to reduce the significance of effects. Therefore, overall, it is considered that **minor negative effects** could arise, but there is uncertainty.

SA Topic 8: Land and soil

Appraisal of the draft Plan

9.95 The strong focus on the regeneration of the urban area, higher densities, and reuse of land for different purposes will serve to protect the land and soil resources that remain, particularly within the Green Belt. With the exception of one site, all of the additional sites identified in the supply are categorised as previously developed land. Of the total site area for additional opportunity sites, less than 1% (and less than 1ha) is categorised as greenfield, and this is either vacant land, open space / allotment, or ancillary residential areas. None of this constitutes best and most versatile (BMV) agricultural land.

9.96 There are some sites where open space/ green space will be developed, but there will be replacements and enhancements throughout the City to counteract this. Outside of the open spaces identified for partial redevelopment, Policy CE13 (Open Space) seeks to protect the remaining open space from development. It only permits development of open space in certain circumstances. For example, where the open space is demonstrated to be surplus to requirement; the open space will be replaced by a similar open space which will be of at least equivalent accessibility, quality and size; the open space is underused; the development is for alternative sport or recreational provision; the open space is small and has limited public recreational function; or it is in the public interest. In this respect, the policy framework successfully protects valued open space.

9.97 More broadly, Policy PG3 (Place-Making) outlines that new development must make best use of existing buildings and consider the efficient use of land, which will have positive implications for land and soil resources. In addition, Policy HN4 (Residential Density) states that new housing in the city centre should have a density of 400 dpa, whilst new housing in the urban centres should have a density of 70 dpa. For both the city centre and urban centres, new housing should be located in and within 400m of the centre; and for the urban centres it should be well served by public transport.

9.98 A density of 40 dpa will be expected outside of the city centre and urban centres. By delivering high density development in the existing built-up areas of the plan area, primarily utilising brownfield land, the policy framework performs very well in respect of soil and land.

9.99 Where there is a loss of soil resources, this relates to already allocated sites such as Langley SUE. The accompanying policy (GA5) does however seek to ensure that impacts on soil resources are minimised.

9.100 The Plan further seeks to ensure efficient use of land and soil resources through Policy CE2, which requires the reuse and recycling of materials including those that arise from demolition and refurbishment.

9.101 To conclude, the strategy positively seeks to avoid development on greenfield land, including in the Green Belt, and as a result, **moderate positive effects** are anticipated under this SA topic. Despite this, it is recognised that the draft Local Plan fails to explicitly mention the importance of productive agricultural land, including BMV land, and in this respect, there is room for improvement.

Appraisal of alternatives

9.102 Development at the sites / broad locations that have been identified within the Green Belt would be assumed to lead to further adverse impacts on land and soil (given that it will lead to the loss of these resources on a relatively large scale).

9.103 The majority of remaining Green Belt land in question is identified as Grade 3 agricultural land. It is uncertain what percentage of this is Grade 3a or 3b, but post 1988 surveys show that there is likely to be a mix of both categories. Regardless, development would ultimately lead to the permanent loss of valuable soil resources, with adverse impacts on agriculture in some part. Due to this, the alternative has the potential to lead to permanent significant negative effects in relation to the land and soil objectives. It should be acknowledged that this approach would still focus considerable redevelopment on brownfield sites and would still promote the reuse of buildings. This would temper the negative effects of Green Belt release somewhat, so that overall, **neutral effects** are concluded.

SA Topic 9: Achieving zero carbon living

Appraisal of the draft Plan

9.104 By locating development in the urban centres, including Birmingham city centre in particular, the spatial strategy locates development in the most sustainable locations, close to the best active travel and public transport networks, and in this respect, it should help to reduce greenhouse gas (GHG) emissions associated with transport.

9.105 The strategy also involves high density development in urban locations, which typically are less resource intensive during occupation compared to less dense, larger homes in peripheral locations. The locations for growth are also located in areas that ought to be able to capitalise on existing and potentially expanding district energy schemes, of which there are several established successful schemes in the city centre. This could help to ensure that carbon emissions associated with new development are further minimised, particularly in growth zones that are close to existing schemes at Broad Street and Birmingham New Street. It is recommended that growth zone policies recognise these opportunities and seek to proactively expand networks if feasible.

9.106 In terms of minimising other sources of GHG emissions, the policy framework – which is outlined below – performs well by focusing several policies on net zero, resilience and whole life cycle assessments.

9.107 Policy CE1 (Climate Change Principles) supports actions to reduce GHG emissions, with the goal of achieving significant reductions in emissions. This will be achieved by minimising embodied and operational emissions by a) reducing consumption of resources, the use of low carbon energy sources, c) adoption a whole life cycle approach and d) offsetting as a last resort.

9.108 Policy CE6 provides further detail in regard to the reduction of carbon emissions and sets the requirement for new development to be accompanied by an energy statement that demonstrates how emissions will be minimised (hopefully to zero operational emissions).

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 to demonstrate the design stage actions taken to reduce embodied carbon and maximise opportunities for reuse of existing assets and materials rather than demolition and new built.

9.113 Policy CE4 (Retrofitting Existing Buildings) reiterates the Council's position in relation to the avoidance of demolition and is supportive of proposals that will improve the energy performance of existing buildings, provided there are no conflicts with national policy. This further demonstrates that the spatial strategy is likely to hep tackle climate change mitigation rather than lead to significant increases in energy usage and carbon emissions.

9.114 The Local Plan supports the city-wide growth of local energy systems to decarbonise new development through Policy CE5 (Renewable Energy Networks and Shared Energy Schemes). This policy encourages the development of heat networks and associated infrastructure; it also addresses development proposals that fall inside and outside of future designated Heat Network Zones. Policy CE5 also encourages development proposals that support the deployment of Smart Grids and Micro Grids that meet the criteria set out within the policy; this includes enhancing energy efficiency and supporting EV infrastructure. Finally, the policy outlines its support for community-led energy schemes as a critical element of Birmingham achieving net zero.

9.115 In terms of issues related to climate change adaptation outside of flooding, which is covered in the section below, the draft Local Plan provides sufficient coverage of this throughout the policy framework. For example, Policy CE4 (Retrofitting Existing Buildings) encourages interventions to improve the resilience of existing buildings to climate change. Similarly, Policy CE2 (Sustainable Design and Construction) outlines that proposals will be required to demonstrate an optimised approach to climate change resilience. Finally, Policy CE5, which supports the deployment of Smart Grids and Micro Grids, as outlined above, aims to enhance the resilience of the grid against climate change impacts and other potential disruptions.

9.116 The strong focus on green infrastructure enhancement across several plan policies is also likely to bring benefits in terms of resilience to heat, flooding, and resilience for the environment and species.

9.117 To conclude, the strategy positively seeks to deliver development in the most sustainable locations from a transport perspective, reducing vehicular emissions, whilst the policy framework seeks to minimise embodied and operational emissions where possible. It is also likely that per capita emissions from the built environment will be lower in denser urban locations compared to larger homes on the urban periphery which tend to be more energy intensive.

9.118 Combined with its support for renewable and low carbon energy generation and resilience to climate change, the draft Local Plan is considered likely to lead to **moderate positive effects** on climate change. Despite this, an element of **uncertainty** remains with respect to the potential for high density development to lead to strains on the transport and renewable energy networks if sufficient new infrastructure is not delivered.

Appraisal of alternatives

9.119 Development of sites / broad locations within the Green Belt is assumed to lead to adverse impacts on achieving net zero carbon living given that they are located further away from the urban areas and associated public transport hubs. Development here could ultimately lead to higher dependency on the private car and would be dependent on the delivery of new infrastructure. This is likely to generate developments with higher embodied carbon, and generally speaking, larger homes in less dense developments tend to have higher per capita emissions compared to their urban counterparts. Whilst design could seek to address the issue of per capita emissions in larger homes, this is not yet common practice.

9.120 Whilst it is recognised that large-scale development has the potential to integrate sustainable transport networks and renewable energy schemes on-site, due to starting from a 'blank canvas', these locations will remain somewhat more isolated from the city centre and other urban centres. There will also be a need to consider the potential loss of carbon sequestration functions through a change in land use.

9.121 Taking the above factors into consideration, the alternative could dilute / offset the positive effects associated with urban regeneration discussed above. As such, the overall effects are predicted to be **minor positive**.

SA Topic 10: Flooding

Appraisal of the draft Plan

9.122 Of all the additional sites proposed for development in the Plan, the majority (almost 90%) fall within Flood Zone 1 in their entirety. However, there are some sites that overlap with Flood Zones 2 and / or 3. Four of these sites are proposed for employment uses and could be made suitable despite the presence of flood risk. The remaining sites are proposed for residential development. Some of these are city centre sites that are previously developed land being promoted for regeneration and will incorporate appropriate flood risk management.

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) outlines that all new development should ensure that flood risk from all sources can be managed for future occupants, and that it does not contribute to increasing flood risk to surrounding land. The policy states that a Sustainable Drainage Assessment and Operation and Maintenance Plan will be required for all major developments. As part of this, developers will need to demonstrate that the disposal of surface water from the site will not exacerbate existing flooding, and that exceedance flows will be safely managed. Moreover, sustainable drainage systems (SuDS) will be required to manage surface water, to minimise flood risk and to ensure no increase in run-off rates for developments requiring a specific assessment.

9.126 Finally, natural flooding which occurs in the floodplains of rivers and streams will be managed in ways which do not place built development or sensitive uses at risk, and which helps to maintain natural river channels and surrounding environments.

9.127 There are several area specific sites that also seek to manage flood risk, with these overlapping with the areas mentioned above. For example:

- Policy GZ7 requires efforts to improve water management within the Hockley Brook Flood Zone.
- Policy GZ10 seeks to transform the River Rea to re-naturalise the river and enhance biodiversity alongside the delivery of new development opportunities.
- GZ17 mentions the need to open up the River Tame, with one of the benefits being improved flood 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 topic.

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. Whilst areas of medium / high surface water flood risk are more prevalent across the Green Belt sites, these areas of flood risk are largely contained within isolated channels and could be avoided through layout and design. Therefore, whilst new development in the Green Belt is unlikely to be at risk of flooding, the overall decrease in greenfield land is still likely to affect wider flood risk without mitigation in place. Due to this, the alternative has the potential to lead to **moderate negative effects** in relation to flooding objectives. As above, there is an element of **uncertainty**, given that measures could be implemented to take a proactive approach to flood management in greenfield developments.

SA Topic 11: Historic environment

Appraisal of the draft Plan

9.132 As the majority of sites and locations identified for development through the draft Plan are directed to the urban centres, with most being directed to the City Centre, there is potential for significant effects under this SA topic. This is because significant increases in densities are proposed in the historic City Centre, which contains numerous designated and non-designated heritage assets. Whilst the largest sites are most likely to lead to the most significant effects on heritage assets over a wider area, this depends to a degree on topography and screening, as well as the detailed design and layout of development. The following sites are noted as being within close proximity to designated heritage assets:

- Two sites (3034 and 2845) overlap with Scheduled Monuments and / or are within close proximity to a listed building. However, these are currently developed sites and used for industrial and retail. Their regeneration for housing is therefore unlikely to give rise to negative effects.

- Site 2811 (Tally Ho) is adjacent to Cannon Hill Park and contains the grade 2 listed Statue of Sir Robert Peel. Site 2855 is also nearby and also falls within Cannon Hill Park. The Tally Ho site is already built-up and a high quality redevelopment is unlikely have negative effects on the setting of Cannon Hill Park. It is presumed that the statue will be retained as part of any development to acknowledge the former use of the police training centre. However, this could be made more certain through the site requirements. Site 2855 is currently vacant land and its development will likely improve the amenity and public realm between Cannon Hill Park and surrounding areas, which is positive.

- Warrick Barr Major Development Site contains three Grade 2 listed buildings (122, Fazeley Street B5, Canal Side Warehouse With Stop Lock And Dock, Warwick Bar, Warwick And Birmingham Canal, Ringway Engineering Service Company). These assets would not be lost to development, but there is potential for effects on their setting. It would be beneficial to set some strategic principles for the site to guide the master planning process and ensure that negative effects are avoided.

- A further ten opportunity sites overlap directly with the following Grade 2 listed buildings:

  - **Taylor and Challen Ltd** - This falls within an opportunity area for housing development. The building is currently in a poor condition externally and it would be expected that development would retain and enhance the appearance of the building. It is not likely that this would be demolished, rather it would be repurposed, and so positive effects ought to arise as a result of redevelopment.

  - **Church of St Michael and Former Powell's Gun Shop** – These two listed buildings both fall within the Martineau Place and Carrs Lane opportunity site. It is likely that these would be retained as part of development, but it would be beneficial to provide policy direction to this effect.

  - **Witton Lane, Tramway Depot** – A development site opportunity for residential has been identified which contains the listed Tramway Depot. Much of the development site is a surface level car park, which does not contribute positively to the setting of the listed building. Development of a suitable scale and design in this location should therefore have neutral effects. It is likely that the Depot itself would be retained as part of development, but it would be beneficial to provide policy direction to ensure this.

  - **45 and 45a Frederick Street** – This is an existing building used for a small business. Whilst the physical appearance of the building would be unlikely to be negatively affected, a change in use would

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

- **11-16 Tenby Street North** – These buildings form an important frontage to the street and represent the areas industrial heritage. The listed building would be retained through development, and the car park to the rear would involve additional buildings. The car park does not contribute to the historical significance of the buildings, and therefore it is anticipated that development will have neutral effects

- **97-100 Albion Street and Gwenda Works** – These buildings fall within an opportunity site for housing development. It is likely that the buildings would be maintained, rather than demolished, at the very least facades would be maintained and restored. Therefore, effects would likely be neutral or positive.

- **Pelican Works** – This listed building falls within an opportunity site for residential development. The site is in a state of disrepair and could continue to decline without finding an active use. There is a presumption the building will be repurposed, rather than being demolished or significantly altered. Redevelopment is therefore likely to have positive effects on the condition of the building (which is also likely to have positive effects on the character of the Conservation Area within which it falls.

- **Lodge to Rotton Park Reservoir** – The Former Tower Ballroom Site contains this Grade 2 listed building on its periphery. Much of the land on site is vacant / derelict and the former buildings are in a poor state. Provided that the building is retained as part of redevelopment, it is likely that effects on its setting would be limited/positive. It is recommended that visibility toward the reservoir should be maintained, and green infrastructure is integral to site design.

- **5 Bell Lane** – This listed building falls within the Prices Square and Bell Lane. . It is likely that the building itself would be retained as part of development, but it would be beneficial to provide policy direction to ensure this.

9.133 Though there are strategic / broad policies that seek to protect heritage and a presumption against demolition, it may be useful to develop site specific requirements for the sites identified above to address potential impacts on buildings and their settings.

9.134 Twenty eight additional sites are within close proximity (i.e. within 30m) of Grade 2 or Grade 2* designated heritage assets, and so have potential to affect their setting. In addition, whilst the majority (over 80%) of opportunity sites are not immediately adjacent to designated heritage assets, there are cumulative effects to consider such as increased traffic, tall buildings and a change in character.

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 policies. For example:

- GZ3 sets out the requirement for the locally listed Former Duddeston Wagon Works to be brought back into use as part of development.
- GZ5 requires that development respects and celebrates the historic parts of the Gun Quarter.
- GZ7 sets out the need for wider development across the Newtown area to re-purpose existing heritage assets including listed and locally important buildings and features.
- GZ10 seeks for development to build on Cheapside's historic character and identity.
- GZ16 recognises the importance of Aston Park and Aston Hall and seeks to enhance the role of Aston Park as an integral part of the areas character. Likewise, it will be important to protect the role of important historic buildings on Witton Road.
- GZ17 highlights the need to repurpose the locally listed former Hare of the Dog public house. Community or commercial uses will be supported , which also ensures that the building retains its role as an important focal point.
- GZ18 highlights the need to protect the unique character, history and natural environment of Edgbaston Reservoir and to re-use listed and locally important buildings in an appropriate way.
- Hockley Port Basin site requirements recognise the importance of non-designated heritage assets and requires a number of measures to ensure that development respects Hockley's industrial heritage.

- Bill House Site Requirements will help to ensure that enhancements to the environment within the gateway of Soho and Lozells Conservation Area respects and retains important historic features.
- City Hospital Site Requirements highlights the need for the Gothic Infirmary frontage building to be retained.
- Site Requirements for Tame Road Industrial Units along the River Tame stipulate that proposals should positively incorporate the non-designated heritage assets within the site.
- Great Brook Street Site Requirements highlight the need for proposals to take account of identified local heritage assets.
- Site Requirements for H-Suite Edgbaston states that all development must be of high-quality, contemporary design to protect and enhance the character of the reservoir and dam, and the setting of heritage assets.
- Site Requirements for the Former Muhammed Ali Sports Centre and Surroundings state that the Grade II Listed heritage assets of Icknield Street School and Albion Place need to be protected and enhanced.
- Site Requirements for Holland Road West Industrial Units must include the retention of the former Post Office locally listed building.
- Site Requirements for Nechells Community Centre require consideration be given to the setting of adjacent locally important buildings.
- Site Requirements for Great Brook Street highlights the need to incorporate locally listed buildings into development and also provides direction on suitable heights in light of these assets.

9.139 There is a presumption against the demolition of buildings, and this is reiterated in Policy CE2, which prioritises the use of previously developed land and buildings and also seeks to retain local character.

9.140 Also of relevance, Policy CE17 (The Canal Network) acknowledges the historic importance of canals, with protection provided for important groups of canal buildings and features, especially where they are listed or in a conservation area.

9.141 More broadly, Policy PG3 (Place-Making) outlines that new development must enhance local identity and sense of place through design that responds to the historical characteristics of the site and local area. In addition, Policy HN1 (New Residential Development) supports development that is sympathetic to historic assets. Finally, Policy CE4 (Retrofitting Existing Buildings) states that the council will encourage improvements in energy efficiency where it is demonstrated that it will not lead to adverse impacts on the special characteristics of heritage assets.

To conclude, the strategy delivers development in sensitive locations from a heritage perspective, and this is likely to affect the character of the urban area in much of 'inner' Birmingham. There could be some negative effects where increased densities and tall buildings affect the setting of heritage assets and the character of areas. However, these would likely be minor and in many instances positive effects would be predicted as redevelopment ought to lead to a reduction of unused buildings and spaces and an improved public realm.

9.142 It is unlikely that important heritage features would be permanently lost, as there are a range of policy measures designed to avoid negative effects. In particular, there is a presumption against demolition, a need to respect local and designated heritage assets, and several location specific policies guiding development. Several listed buildings that fall within development sites are also in a poor condition, and therefore repurposing for residential will likely lead to positive effects by securing a long term productive use (and through physical improvements to the buildings). Without regeneration, heritage assets and their settings could continue to decline in appearance and use / condition.

9.143 The important thing is to ensure that development is respectful of character and history – which the plan seeks to achieve through a range of policies. In this respect, it is considered that cumulatively, there will be **moderate positive effects** on the historic environment.

Appraisal of alternatives

9.144 The majority of sites / locations identified within the Green Belt do not contain designated heritage assets. Therefore, it is unlikely that there will be direct effects on the historic environment in this respect (for example, through demolition). Some sites / location are also not adjacent to any designated heritage assets and are therefore unlikely to affect the setting of such features. The exception is a broad location which encompasses Fox Hill House Grade II Listed Building and Kiln and is also adjacent to Ashfurlong Hall (Grade II*). Development in this area would likely have negative effects on the setting of these assets.

9.145 Large scale development could also lead to a deterioration in the historic landscape in these locations, and the wider area (through cumulative effects). For example, there are historic field systems and records of archaeological interest across the areas involved to the north of Birmingham.

9.146 In addition, substantial development to the north of Birmingham has the potential to put additional recreational pressure on nearby Sutton Park, which is a Grade II Registered Park and Garden.

9.147 On balance, additional development in the Green Belt is considered most likely to give rise to minor negative effects. The positive effects identified for the urban areas associated with regeneration would also still arise, but there could be some increased uncertainty should green belt development mean that brownfield opportunities are not prioritised.

SA Topic 12: Natural landscape

Appraisal of the draft Plan

9.148 The spatial strategy performs well by delivering high densities of development in the City Centre and other urban centres within the plan area. This will hugely help mitigate adverse impacts on landscape character, particularly within and within proximity to the Green Belt. Nevertheless, it is noted that the spatial strategy has the potential to lead to adverse impacts on townscape character in the smaller urban centres outside of Birmingham city centre. However, it is noted that this will be mitigated to some degree through site design and layout.

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 the landscape character in these locations, and the wider area, even with high quality design utilising GI and other landscape-enhancing measures.

9.157 There would still remain large amounts of Green Belt beyond the Birmingham administrative boundary, but release of Green Belt in Birmingham could mean that there are limited areas of open green space left between Birmingham and other neighbouring authorities. The sensitivity of landscape character and the function of the Green Belt would need to be explored in more detail to understand the significance of effects, but it is likely that these would be significant negative effects in relation to landscape objectives. Alongside mixed effects on some townscapes, overall, the alternative could potentially have **moderate negative effects** on landscape and townscape objectives.

SA Topic 13: Biodiversity and geodiversity

Appraisal of the draft Plan

9.158 The majority of sites allocated through the draft Plan are directed to the urban centres, with the majority being located in the City Centre. Only a small proportion of sites are allocated elsewhere. The urban centres are not within close proximity to any internationally, nationally or locally designated sites for biodiversity, and therefore adverse impacts arising from recreational use are considered unlikely at this stage. Nevertheless, Policy CE10 (Biodiversity and Geodiversity) seeks to maintain, enhance and restore sites of national and local importance for biodiversity and geodiversity in line with the mitigation hierarchy. The policy outlines that habitats should be protected by appropriate buffers and, if necessary, barriers in order to prevent adverse impacts, including those arising from recreational use. It also highlights the importance of ecological connectivity by ensuring that development that would lead to habitat fragmentation does not take place.

9.159 Of all the sites included in the strategy, none are within 8.5km of a European protected site, with the majority being over 10km. In terms of cumulative effects it is considered unlikely that there will be significant effects on European sites, but this will need to be confirmed through a HRA screening assessment.

9.160 Of all the proposed site allocations and other opportunity sites only 10 are located within 1km of a SSSI. None are within 300m of a SSSI.

9.161 Of these sites, several are close to Sutton Park SSSI and National Nature Reserve, with a combined land area of approximately 10ha and promoted capacity of around 850 new homes. Residents from these homes should have good access to use the park regularly for recreation. This could cause additional potential for littering and pollution, and disturbance to wildlife. There are already measures in place to manage such impacts (outside of the planning process), so it is considered unlikely that a small increase in local population would lead to significant effects (given the substantial number of visitors the park already attracts). Such effects should also be addressed through the planning policy framework in the Plan, which requires new development to protect and enhance biodiversity. It is also noted that the sites involved are brownfield and therefore, there is unlikely to be any displacement of existing natural greenspaces that are used for recreation or by species directly.

9.162 Several sites are also within 1km of the Edgbaston Pool SSSI. In combination these have a promoted capacity for housing of approximately 600 new homes on 5ha of land in total. These are brownfield sites and will not lead to the displacement of any existing natural greenspaces used for recreation.

9.163 The new homes would be in close proximity to the SSSI and could potentially be drawn to use it for recreation. However, there is a charge to access the site, and it is therefore unlikely to see a significant increase in local visitation due to new residents.

9.164 No sites overlap with ancient woodland, but it is noted that eight sites fall within 800m of such habitat. Of these sites, there is a total land area of 7.6ha and combined capacity of around 630 new homes. The sites are not sufficiently close to cause direct damage to the ancient woodlands through construction, or a permanent change to land use that would directly disturb species using the habitats. However, it is likely there would be some increased recreational pressures that could have some minor negative effects. Though the wooded areas in question are publicly accessible, the amount of additional pressure likely to arise in one location is very low given the dispersed nature of the housing sites. Therefore, significant effects are considered unlikely.

9.165 Sites of importance for nature conservation (SINCs) are widespread across Birmingham, but the majority of development opportunities do not directly overlap with such areas (i.e. over 98% of sites). Where there is overlap with new housing allocations / growth zone opportunities, it is open space / playing fields. There is likely to be some biodiversity value here, but policies in the Plan require mitigation and enhancement, so effects are unlikely to be significant in this respect.

9.166 A larger proportion of the sites proposed for housing or employment overlap with ‘Sites of Local Importance for Nature Conservation’, with the following locations seeing multiple sites overlapping or directly adjacent to these sites.

- Birmingham canal
- Rea Valley / River Rea
- Tame Valley
- Birmingham and Fazely Canal
- Project Kingfisher
- Worcester and Birmingham Canal

9.167 The land involved for development is mostly cleared vacant land and / or former industrial uses, and there is unlikely to be a direct loss of habitat. There could be some disturbance to wildlife along these wider corridors, but more likely is that development could lead to enhancements in the environment (given that this is a focus and requirement of several policies in the Plan).

9.168 The potential for Biodiversity Net Gain (BNG) on dense urban sites is unclear at this stage. However, Policy CE10 outlines that all development proposals, including those that are exempt from mandatory BNG requirements, must provide biodiversity and geodiversity enhancement measures that are appropriate to the nature and scale of the development.

9.169 In support of this, Policy CE11 (Biodiversity Net Gain) states that new developments must provide a minimum of 10% BNG. This will be established using DEFRA's Biodiversity Metric. Notably, new developments must deliver BNG on site, unless there is robust evidence that this is not feasible. In this case, BNG will need to be delivered off site as an alternative (which could present benefits for strategic opportunity sites).

9.170 There is also a need for watercourses to be protected and enhanced and the need to apply appropriate buffer zones and barriers between new development and important habitats.

9.171 More broadly, urban greening at major developments will be achieved through Policy CE12 (Urban Greening Factor). Residential developments will be required to achieve a minimum urban greening factor score of 0.4, whilst Class E, B2, B8, F or sui generis uses will be required to achieve a minimum score of 0.3. In addition, Policy PG3 (Place-Making) outlines that new development must maximise the restoration and enhancement of biodiversity and the delivery of BNG.

9.172 CE9 is also an important policy with regards to biodiversity as it seeks to protect and enhance green and blue infrastructure networks. This will involve consideration of the biodiversity value of green infrastructure and makes specific reference for the need to re-naturalise watercourses, which is particularly beneficial for water quality and any reliant species.

9.173 In addition to the broad policies that cover development in all locations, there are several spatially specific policies that also mention the need to secure enhancements to biodiversity. Of note are the growth zone policies that seek to secure green infrastructure improvements, which could help to strengthen wildlife corridors. For example:

- PG3 (Central Birmingham), seeks to deliver a greener, bio-diverse, and climate resilient environment.
- GZ18 seeks to achieve biodiversity enhancement along canals.
- Green infrastructure needs to be incorporated into development through site specific requirements. This includes tree planting, landscaping, etc.
- GA5 reiterates the need for the Langley SUE to deliver ecological improvements on site and linking with the wider Green Belt.

9.174 To conclude, the strategy positively seeks to avoid development in the most sensitive locations from a biodiversity perspective, and there are several policies promoting / requiring enhancements to biodiversity features and networks. Where growth is relatively close to biodiversity habitats, the potential for negative effects is considered to be low due to the mitigation measures outlined within the policy framework and the low magnitude of impacts. As a result, it is predicted that **moderate positive effects** would arise as a result of the draft plan. Despite this, an element of **uncertainty remains** with respect to the potential for dense urban sites to deliver the required level of BNG. In this respect, there is ultimately the potential for the positive effects to be diluted and / or delivered outside of the urban areas (though benefits for Birmingham overall would still be achieved).

Appraisal of alternatives

9.175 Development at the sites / locations within the Green Belt is assumed to lead to adverse impacts on biodiversity and geodiversity given that the Green Belt currently contributes to local biodiversity, providing a habitat for numerous species (in particular there are pockets of woodland). Development here could ultimately lead to a degree of habitat fragmentation, even with green infrastructure and other mitigation measures delivered on-site.

9.176 Due to this, the alternative has the potential to lead to negative effects in relation to biodiversity objectives. However, it should be acknowledged that there may be potential to achieve higher levels of biodiversity net gain on some sites outside of the urban areas, which presents a possible longer-term opportunity.

9.177 Release of Green Belt could also lead to a significant increase in residents close to Sutton Park SSSI, which would likely bring substantial recreational pressure to an already busy location. In one respect, this could bring about negative effects, whereas on the other hand it could bring an opportunity for a new recreational space to be delivered as part of a strategic development. This would help alleviate pressure on the SSSI as well as providing space for new habitats.

9.178 However, this would very much be dependent upon a green infrastructure led approach to development and the commitment to significant new area of open space and biodiversity net gain. At this stage, this is an uncertainty. On balance, **minor positive effects** are predicted overall, factoring into account the potential negative effects of development, but these being offset to an extent by good opportunities for mitigation and enhancement.

SA Topic 14: Accessibility and transport

Appraisal of the draft Plan

9.179 As noted in the draft Local Plan, the A4540 orbital 'ring road' forms a boundary to the city centre. The radial routes provide areas prime for corridors of sustainable higher density development and links to many of the city's local centres. The spatial strategy performs well in this respect, locating a significant proportion of development both within this ring road, and along its radial routes. This part of the city is best served by public transport, with many services and facilities accessible via active travel (walking and cycling). This should reduce the use of the private car, with positive knock-on effects for the health of residents in the city centre.

9.180 The City's Strategic Highway Network comprises the M6 and A38(M) Aston Expressway, which connects road users directly to the City Centre (via the Tame Valley Viaduct and the Spaghetti Junction) and the A road primary route network, which is generally characterized by key corridors radiating out from the City Centre. These link the City to the national motorway network via the M5, M6 and M42 (which form the Birmingham Motorway Box / Orbital) as well as the M6 Toll and M40. The draft Local Plan outlines that these roads will continue to be managed in ways to maintain their capacity so that longer distance travel can use A-roads to their destination (or from their origin) within the plan area. It is anticipated that these types of trips include HGV / LGV / van deliveries, commuters and visitors.

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 walking environments and accessible services.

9.185 Public transport is addressed through Policy CY3 (Public Transport), which recognises the importance of the bus as a mode of public transport. The council outline their plan to continue working alongside Transport for West Midlands and bus operators to improve the bus network, working under the principles of Bus Back Better – National Bus Strategy for England (2021). In terms of rail, the policy highlights that Birmingham will be the centre of future rail growth. As such, it supports the Midlands Rail Hub, which is the region's biggest and most ambitious rail improvement scheme: a £900m – £1.5bn blueprint for faster, better and more frequent connections across the Midlands.[4] The scheme will add more than 14 million seats to the rail network each year and provide faster, more frequent or new rail links for over 30 locations, including Birmingham. Policy CY3 also supports the development and extension of metro / bus rapid transit.

9.186 Policy CY3 also covers HS2, outlining that the council will continue to protect land within the designated HS2 Safeguarding Area as it evolves. Though the Government have recently announced their plans to scrap HS2 Phase 2 – the Birmingham to Manchester leg – none of the safeguarded areas for this phase are within Birmingham(. Nevertheless, Phase 1 – the London to Birmingham leg – is still underway.

9.187 Freight is addressed through policy CY4 (Freight), which supports freight decarbonisation; freight consolidation and last mile deliveries; sustainably located freight hubs; and modal controls (i.e. restrictions on the size and type of vehicles that can access residential areas).

[4] Midlands Connect (2023): 'Midlands Rail Hub', [online] available to access via this link

9.188 The plan highlights that the council will work alongside national, regional and local partners to lobby for issues outside of the council's control, these are primarily related to infrastructure funding and policies to bridge the gap to reach zero carbon by 2030 (an ambitious target).

9.189 Policy CY5 (Network Management) encourages the optimum use of existing highway infrastructure across all modes. The policy also prioritises investment in the highway network to support the city's sustainable transport network.

9.190 More broadly, Policy PG3 (Place-Making) outlines that new developments must create environments that are legible, accessible, permeable and well-connected to local services and facilities, especially through walking and cycling, and provide the necessary infrastructure to promote active travel and public transport use. In support of this, Policy HN1 (New Residential Development) supports development where it is accessible to local facilities by modes of transport other than the car. Moreover, Policy HN8 (Large-Scale Shared Accommodation) supports development proposals for large scale shared accommodation where it is located within central Birmingham where car free development is expected; has excellent public transport, walking and cycling connectivity; and is well served by local services and facilities.

9.191 Policies that outline similar criteria include Policy HN7 (Purpose Built Student Accommodation); Policy HN11 (Educational Facilities); Policy HN12 (Healthy Neighbourhoods); and Policy CE14 (Playing Pitches and Sports Facilities).

9.192 In relation to the spatial strategy, Policy HN4 (Residential Densities) outlines that new housing in the city centre should have a density of 400 dpa, whilst new housing in the urban centres should have a density of 70 dpa. For both the city centre and urban centres, new housing should be located in and within 400m of the centre; and for the urban centres it should be well served by public transport. A density of 40 dpa will be expected outside of the city centre and urban centres. Whilst this is positive in terms of active travel and public transport uptake, it could lead to capacity issues on some services, and this will need to be considered in advance.

9.193 In addition, Policy EC2 (Core Industrial Areas) outlines that transport infrastructure (including the movement of freight by rail) improvements will be sought.

9.194 In support of the broad principles for sustainable transport discussed above, the growth zone policies and site specific requirements set out the need for new developments to:

- Accommodate metro, bus and sprint services.
- Enhancement of public transport infrastructure including expansion of metro and rail stops.
- Supporting green, active travel corridors.
- Improved signage, clear walking and cycling routes, and improved facilities for cycling.

9.195 Another point worth discussing is the likelihood of housing needs not being met in full. It is unclear at this stage where such needs would be accommodated, but it could possibly lead to greater requirements for commuting should people with a job in Birmingham only find suitable accommodation outside of the City. This brings an element of uncertainty.

9.196 To conclude, the strategy positively seeks to deliver development in the most sustainable locations from an accessibility and transport perspective. There is also a strong policy framework that promotes the enhancement and expansion of sustainable and active travel routes. As a result, significant positive effects are anticipated. Despite this, an element of **uncertainty remains** with respect to the potential for high density development to lead to strains on the existing transport network. Furthermore, it is possible that unmet housing needs may lead to increased commuting.

9.197 Overall, the majority of growth is likely to be sustainably located, but this is offset slightly by the likely increase in car trips. Therefore, **moderate positive effects** are concluded on balance.

Appraisal of alternatives

9.198 The sites that have been identified as available for development within the Green Belt are assumed to lead to adverse impacts on accessibility and transport given that they are located away from existing urban areas and associated public transport hubs. Development here could ultimately lead to higher dependency on the private car. Whilst it is recognised that development at the larger sites could be accompanied by new sustainable transport infrastructure, this is unlikely to be at the same scale as that within the city centre and other established urban centres across the plan area. Due to this, the alternative is likely to give rise to increased negative effects in terms of accessibility and car trips. However, given that this option is delivering a higher scale of growth in a more dispersed manner, this is not unexpected.

9.199 Overall, **minor positive effects** are predicted, reflecting that a large amount of growth will be extremely accessible and encourage sustainable and active travel, but also acknowledging some poorer access on Green Belt sites and an overall higher level of vehicle trips.

Summary

The table below sets out a visual summary of the Sustainability Appraisal findings. The appraisal considers two reasonable alternatives. The first alternative is the draft Plan approach, where all the draft policies have been considered in combination to determine the overall effects across Birmingham. The second alternative involves the same plan policies but presumes that there would be additional Green Belt release to meet a greater proportion of housing needs. Following the summary of appraisal findings, a short list of recommendations are presented for consideration by the Council before finalising the Plan.

Appraisal Topics	The Draft Plan	Green Belt release
1. Housing	Moderate positive	Major positive
2. Equality, diversity and community	Major positive	Major positive
	Moderate negative	Minor negative
3. Health and Wellbeing	Moderate positive	Major positive
4. Waste and resource use	Minor positive	Neutral
5. Economy and employment	Moderate positive	Major positive
6. Air quality	Neutral	Minor negative
7. Water quality	Minor positive	Minor negative
8. Land and soil	Moderate positive	Neutral
9. Zero carbon living	Moderate positive	Minor positive
10. Flooding	Minor negative	Moderate negative
11. Historic environment	Moderate positive	Moderate positive?
	Minor negative	Minor negative
12. Natural landscape	Neutral	Moderate negative
13. Biodiversity	Moderate positive	Minor positive
14. Accessibility and transport	Moderate positive	Minor positive

9.200 Overall, a range of effects are identified, and some uncertainty is noted at this stage. The uncertainty relates to the unmet housing needs as currently no precise locations have been identified to meet these needs in the wider Birmingham HMA. The plan therefore places high reliance on supporting housing delivery in neighbouring areas.

9.201 Despite this, the plan places a strong emphasis on regeneration and renewal, with a brownfield-led plan supported by increased densities and estate renewal. This means future residents will benefit from growth in the most accessible and connected areas of the city, with targeted efforts to improve some of the most deprived areas of the city.

9.202 The preferred strategy avoids any further Green Belt release which will ultimately reduce the environmental pressures associated with development and protect key greenfield land resources within the city (with the Green Belt release option notably performing worse in relation to certain SA topics in this respect). However, it recognised that Green Belt release would contribute more homes and deliver more affordable housing within the city, with secondary benefits in terms of health and wellbeing and economic growth.

9.203 The supporting policy framework provides a proactive approach to supporting sustainable development in the right locations and should ensure that development delivers wider benefits such as high-quality design, an improved green infrastructure network, new open spaces, job creation, improved flood defences and increased biodiversity and access to nature.

9.204 Though there is a focus on regeneration and reducing inequalities, there is the potential for regeneration in existing communities to have negative effects on residents and small businesses if they are displaced. The Plan policies seek to avoid such impacts, by stating that communities will need to be involved in plans for development in their areas. Therefore, it is predicted that any residual effects would be minor.

9.205 A number of locations and sites pinpointed for development are at risk of surface water flooding and / or falling within flood zones 2 / 3. The strategy therefore raises the potential for an increased number of new homes being at risk of flooding. This is mainly the case where industrial land is being proposed for re-purposing as residential.

9.206 Air quality, transportation and congestion are key issues within Birmingham. Whilst the strategy places development in very accessible locations, there is a danger that intensification could exacerbate traffic and air quality issues in the central areas. The Plan seeks to minimise negative effects through demand management, promoting sustainable transport enhancements and through environmental improvements. There are likely to be some residual negative effects though, particularly whilst developments are being built and infrastructure improvements are not finalised. Increasing growth further through Green Belt release would further add to these pressures (albeit away from the most problematic locations), which is reflected by less positive outcomes in this respect for the reasonable alternative.

9.207 With regards to heritage, the Plan has the potential for mixed effects. The majority of growth is directed towards locations that have historic and cultural value, which is likely to lead to changes to the built environment. It is considered unlikely that development will lead to a direct loss or damage to heritage features, particularly as there is a presumption against demolition and a need for high quality design. Several developments will also lead to the productive use of buildings and land that may otherwise face further decline. In this respect, positive effects are predicted. Where there are substantial increases in density and the repurposing of the built environment, there is potential for the character and identity of areas to be negatively affected, but the Plan seeks to minimise such issues, and so residual effects are considered minor. It is considered unlikely that additional growth in the Green Belt would lead to a significant difference in effects upon the historic environment compared to the preferred approach.

9.208 The Plan is predicted to have a positive impact in terms of addressing climate change mitigation. Increased densities and urban concentration provide the opportunity for growth to be less resource intensive, as well as taking advantage of opportunities to expand district energy schemes. There is also a presumption against demolition and the need to deliver high standards of sustainable design.

9.209 With regards to climate change resilience, it is acknowledged that there may be an increase in homes placed in areas at risk of flooding. However, development will need to mitigate potential impacts. There is also a strong focus on green infrastructure improvements throughout Birmingham, which should help to improve resilience to increased heating and flooding in the longer term.

9.210 Some uncertainties remain, which should be explored in greater detail and potential negative effects addressed. This includes the following:

- It is recommended that significant increases in growth are supported by infrastructure enhancements prior to development being completed (to ensure that pressures upon services, facilities and transport networks are managed through careful phasing).

- It would be beneficial to identify areas that could support biodiversity net gain contributions (should it not be possible for developments to achieve net gain on site). This could help to feed into a Local Nature Recovery Strategy.

- Though much of the City is urban, it would be helpful to reiterate the importance of protecting best and most versatile agricultural land where it remains.

- Provide a policy that explicitly addresses how unmet housing need may be addressed in the wider City region (with a potential trigger for a plan review should delivery rates be lower than anticipated).

- It may be beneficial to refer to the need for a proportionate hydrogeological risk assessment to be carried out where development sites overlap with groundwater source protection zones.

10. Next Steps

10.1 This report presents the outcomes of an interim step in the SA and plan-making process. The focus has been on identifying and appraising preferred approaches for different elements of the Plan.

10.2 The preferred Plan at this stage consists of a spatial strategy and a range of supporting policies that have been informed by previous stages of plan making (including consideration of a range of issues and options). In terms of alternatives (to the preferred Plan) only one has been identified as reasonable at this stage (bearing in mind that a range of higher level options were tested in the SA at previous stages).

10.3 The alternative is to increase the amount of housing growth being planned for through the further release of Green Belt land. All other elements of the Plan are considered consistently across both alternatives.

10.4 A full SA Report will be prepared to accompany the draft Plan. This will draw together all the SA outputs that have been prepared to date as well as discussing additional appraisal work that will be undertaken following consultation (on this interim SA Report and the draft Plan).

10.5 There may be a need to appraise further alternatives with regards to housing and employment strategy and site allocations. Factors that will be taken into account in this respect include changes / updates to evidence and consultation responses.

10.6 Comments on this Interim SA Report are welcomed, particularly in relation to the following elements:

- Have an acceptable range of reasonable alternatives been considered at this stage in relation to housing growth and distribution?
- Should alternative strategies for employment growth be explored and if so what are these?
- Should further alternatives be tested in relation to other plan issues (bearing in mind that a wide range of issues have already been explored at issues and options stage)?
- Do the predicted effects for the preferred Plan (and reasonable alternative) seem reasonable and justified?
- Are there any further recommendations for mitigation and enhancement?

APPENDIX A – The SA Framework

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
1. Housing	1a) To meet housing needs of the current and future resident and by providing decent affordable homes of right quality and type.	Will it reduce homelessness? Will it provide a mix of good quality housing, including affordable homes?	Number of people recorded as homeless Net additional dwellings. Housing mix (types, size, tenure) Net additional pitches Number of extra care homes	Human Health Material Assets Population
2. Equality, diversity and community development	2a) To promote safer communities and reduce the fear of crime and antisocial behaviour.	Will it reduce the fear of crime in all age and cultural groups? Will it reduce antisocial behaviour amongst the population? Will it promote design that discourages crime?	Community safety crime rates in the city. Serious acquisitive crime rate. Reducing arson incidents. Serious violent crime rate. The number of gun crimes committed in Birmingham.	Population Human Health
2. Equality, diversity and community development	2b) To reduce Index of Multiple Deprivation (IMD) to address poverty and help improve access to facilities and services for disadvantaged individuals and communities	Will it reduce deprivation and improve access to services and facilities?	Reduction in IMD score at ward and super output area level.	Population Human Health

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
2. Equality, diversity and community development	2c) Ensure easy and equitable access to services, facilities and opportunities.	Will it improve access to services and facilities? Will it maintain and improve access to key services and facilities for all sectors of the population? Does it promote accessibility for disabled people?		Population Material Assets
2. Equality, diversity and community development	2d) Support, empower and connect communities to create a healthier and just society.	Will it help to create a better healthier and just society? Will it empower and connect communities?	Number of schemes with adequate infrastructure to improve social inclusion and connectivity Number of developments/schemes taking account of health as a material asset	Population Human Health

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
3.Health and wellbeing	3a) To improve the health of the population and reduce health inequalities.	Will it improve access to health facilities and social care facilities? Does it help provide equitable access to health services? Will it encourage healthy lifestyles? Will it support the diverse range of health needs within the community? Will it contribute to a healthy living environment? (noise, odour etc?) Will lit avoid locating development in locations that could adversely affect people's health? Will it improve accessibility for people with disabilities? Will it provide sufficient areas of accessible green multifunctional spaces? Will it provide opportunities for contact with nature?	Condition of residents general health(ONS/Local datasets) Change in the amount of Accessible Natural Greenspace (Natural England) Decent homes – council housing and RSLs. Percentage of the city's population having access to a natural greenspace within 400 metres of their home Hectares of accessible open space per 1,000 population in each ward Tree canopy cover in each ward (the threshold is 25%) Gap between the areas with the worst health and deprivation indicators and the population as a whole. Number of planning applications meeting ANGSt Number of people using parks & greenspaces after improvements	Population Human Health Climatic Factors Flora Fauna Biodiversity

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
3.Health and wellbeing	3b) To improve access and availability of sports and recreation facilities.	Will it improve accessibility and availability of sports and recreation facilities?	Number of new sports pitches or other leisure facilities delivered annually through development.	Population Human health
3.Health and wellbeing	3c). To improve access and availability to open spaces.	Will it improve access and availability of open spaces? Will it improve access and wayfinding to the local canals?	Percentage of the city's population having access to a natural greenspace within 400 metres of their home Length of greenways constructed. Hectares of accessible open space per 1,000 population	Population Human health
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.	Waste Climatic Factors
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 minerals	Population Material Assets

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?	Vacancy rates Loss of employment land to other uses (AMR). Working age people claiming out of work benefits in the worst performing neighbourhoods. Number of business paying business rates	Population Material assets Human health
5. Economy and employment	5b) To achieve sustainable levels of prosperity and growth throughout the city.	Will it improve business development and enhance competitiveness? Will it promote growth in key sectors? Will it encourage inward investment? Will it make land available for business development?	Amount of land developed for employment by type (AMR). Employment land supply by type (AMR) Percentage of small businesses in an area showing employment growth Estimated new job creation Increased levels of investment.	Population Material assets Human health
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	Working age population qualified to at least Level 2 or higher. Working age population qualified to at least Level 4 or higher.	Population Material assets

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		access high quality employment opportunities suited to the changing needs of Birmingham's economy whilst recognising the value and contribution of unpaid work?	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).	Human health
5. Economy and employment	5d) To maintain and enhance the vitality and viability of town and retail centres	Will it increase the range of employment opportunities, shops and services available in town centres? Will it decrease the number of vacant units in town centres?	Number of vacant units in town centres. Increased levels of spend. Enhanced retail facilities.	Population Material assets Human health
7. Air quality	7a). Minimise air pollution levels and create good quality air.	Will it improve air quality? Will it avoid exacerbating existing air quality issues in designated AQMAs? Will it reduce CO_2 emissions? Will it contribute to a healthy environment?	Estimated CO_2 emissions in the city Nitrogen dioxide levels. Number of publicly available long stay parking spaces in the City Centre.	Air Climatic factors Population

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
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?	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. Number of children killed or seriously injured in road accidents in Birmingham.	Material Assets Population Air quality
8. Water quality	8a) Minimise water pollution levels and create good quality water.	Will it improve water quality? Will it support the achievement of Water Framework Directive Targets? Will it promote sustainable use of water? Will it support the provision of sufficient water supply and treatment	Number of planning permissions granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality (AMR). Biological quality of rivers (Working with the Grain of Nature).	Water Material assets Fauna

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		infrastructure in a timely manner to support new development? Will it improve water quality on the canal network?	Percentage of water bodies classified as being of 'good ecological status'. Creation and retrofitting of SUDs in the city	
9. Land and soil	9a) Minimise soil pollution levels and create good quality soil.	Will it maintain and enhance soil quality? Will it encourage the efficient use of land? Will it minimise the loss of soils to development? Will it encourage the use of previously developed land and/or the reuse of existing buildings? Will it prevent land contamination and facilitate remediation of contaminated sites?	Area of contaminated land. Percentage of development recorded on greenfield / brownfield land	Soil
9. Land and soil	9b) Encourage land use and development that creates and sustain well-designed, high quality distinctive and sustainable places.	Will it encourage development of well-designed and sustainable places?	Number of well-designed places	Population Human Health

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
				Material Assets
9. Land and soil	9c) Encourage the efficient use of previously developed land and buildings and encourage efficient use of land.	Will it improve sustainable use of previously developed 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 previously developed land and buildings)?	% of permissions granted on previously developed land as a % of previously developed land available within the city. Percentage of employment land, by type which is on previously developed land (AMR).	Population Material Assets Biodiversity
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 reducing energy consumption? Will it increase the proportion of energy needs being met by renewable sources? Does it help reduce dependence on fossil fuels? Will it reduce reliance on carbon hungry materials e.g. bedding plants in parks?	Carbon dioxide emissions and Greenhouse gas emissions.	Climatic factors Population Flora Fauna Human Health Biodiversity Landscape

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
				Water Material assets Air Quality
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
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?	Estimated number of properties at risk from flooding Number of schemes incorporating nature based SUDs mechanisms Number of planning permissions granted contrary to the advice of the	Water Biodiversity

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		Will it help reduce surface water flooding Will it safeguard land for future flood defences? Will development allow sufficient easement (8-20m) from the top of the bank of a watercourse / river? Will area flood more often or to a greater depth due to climate change ?	Environment Agency on either flood defence grounds or water quality Land available for future flood defences	
12. Historic environment	12a) Value, conserve, enhance and restore Birmingham's built and historic and archaeological environment and landscape.	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? Will it conserve and enhance sites, features and areas or archaeological value?	Number of heritage assets recorded as 'at risk' Number of Conservation Areas with an up to date character appraisal and a published Management Plan. Number of Grade II Buildings considered to be buildings at risk. Number of buildings of historic or architectural interest brought back into active use. Number, or % or area of historic buildings, sites and areas and their	Cultural Heritage Landscape

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		Will it safeguard and enhance the character of the local landscape and local distinctiveness? Will it provide opportunities to enhance the historic environment? Will it safeguard and enhance the character of the city's historic canal network?	settings (both designated and non-designated) damaged. Loss of historic landscape features, erosion of character and distinctiveness (HLC). Extent and use of detailed characterisation studies informing development proposals (HLC). The proportion of housing completions on sites of 10 or more which have been supported, at the planning application stage by an appropriate and effective landscape character and visual assessments with appropriate landscape proposals.	
13.Natural landscape	13a) Value, protect, enhance and restore Birmingham's natural landscape.	Will it safeguard and enhance the character of the local landscape and local distinctiveness? Will it improve the landscape quality and character of the countryside? Will it reduce the amount of derelict, degraded and underused land?	Number of planning applications accompanied by a landscape appraisal Development brought forward through regeneration projects.	Air Landscape Population Material Assets

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
				Climatic factors Biodiversity
14. Biodiversity and geodiversity	14a) To conserve and enhance biodiversity and geodiversity.	Will it conserve and enhance natural/semi natural habitats and conserve and enhance species diversity? Will it maintain and enhance European designated nature conservation sites? Will it maintain and enhance nationally designated nature conservation sites? Will it maintain and enhance locally designated nature conservation sites? Will it help deliver the targets and actions in the Biodiversity Action Plan? Will it help to reverse the national decline in at risk species? Will it protect and enhance sites, features and areas of geological value in both urban and rural areas?	Change in the number and area of designated ecological sites Impact on the Local Nature Recovery Network Recorded condition/status of designated ecological sites Number of planning approvals that generated any adverse impacts on sites of acknowledged biodiversity importance Percentage of major developments generating overall biodiversity enhancement Hectares of biodiversity habitat delivered through strategic site allocations	Biodiversity Flora Fauna Climatic factors Population Water Landscape

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
		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?	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).	Material Assets Population Air quality Human health

SA Topics	SA Objectives	Guide questions	Potential monitoring indicators	Topic in the SEA Directive
			Number of people killed or seriously injured in road accidents in Birmingham. Number of children killed or seriously injured in road accidents in Birmingham.	
15. Accessibility and transport	15b) Ensure development reduces the need to travel and reduce the negative impacts of transport on the environment	Will it reduce traffic volumes? Will it reduce average journey length? Will it reduce the negative impact of transport?	Increase in road traffic. Workplace Travel Plans. Number of people working from home. Reduction in number of journeys	Material Assets Population Air quality Human health
15. Accessibility and transport	15c). Urgently and drastically reduce carbon emissions from transport to contribute to the Council's decarbonisation commitment.	Will it reduce the emissions associated with transport? Will it contribute to Council's decarbonisation agenda?	Reduction in the amount of emissions associated with transport.	Material Assets Population Air quality Human health

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 housing as it would deliver a higher number of dwellings than otherwise would be the case, in locations that are likely to be more sustainable in terms of transport, services and employment provision. Furthermore, the increased density may help deliver a greater proportion of affordable housing due to the potential for improved viability obtained as a result of lower land acquisition costs per dwelling. The approach may also help in meeting the significant strategic challenge of meeting Birmingham's housing need and reducing the shortfall arising from the Birmingham Plan.

3. **Equality, diversity and community development:** The increased growth within the City Centre and urban centres implemented through this approach can significantly help improve accessibility to jobs, education and employment. This is particularly helpful for residents living in deprived neighbourhoods around the City Centre and inner city areas, as it is likely to provide improved outcomes through improved access to health, education, employment and services.

4. The increased housing growth is also likely to improve affordability in these locations through increased affordable housing delivery and increased choice in term of type, tenure and size of dwellings. Therefore, potential **positive effects** are predicted.

5. Conversely, increasing densities fourfold could lead to more cramped urban living environments that do not achieve good standards of living for communities living here, which is likely to affect those most disadvantaged groups. This is a potential **negative effect** that would need to be addressed. It is envisaged that plan policies would be applied to ensure minimum space standards and seek good design. However, higher densities still present potential issues in relation to living environments. Whilst negative effects are not a certainty, they are a possibility.

6. **Health and wellbeing:** As discussed above, the increased housing growth within some of the more deprived areas in the City Centre and urban centres is likely to produce beneficial outcomes due to improved access to services, jobs and facilities. The increased density is also likely to produce improvements in the existing infrastructure (e.g. transport, education and healthcare) and potentially attract investment for new infrastructure. The increased densification can potentially have positive effects on open/ green space provision as it is likely to limit encroachment on existing areas of open space and green space. This would be particularly effective if brownfield and previously developed land were to be fully utilised under this approach. Conversely there are potential negative effects as the increased density in already congested City Centre and urban centre locations is likely to exacerbate issues such as traffic, noise and pollution which would adversely impact residents' health and wellbeing. The approach can also exacerbate urban heat island effects rendering the city more vulnerable to heat waves. It may be possible to mitigate some of these effects through site specific polices for example through the implementation of a clean or low emission zones, car free neighbourhoods and park and ride schemes. Overall mixed effects are predicted with potential **positive effects** due to enhanced accessibility to services and jobs, the likely preservation of green and open space and the improved housing choice and affordability with some uncertain **negative effects** due to increased vulnerability to urban heat island effects and pollution associated with traffic congestion and other urban activities.

7. **Waste and resource use:** Recycling rates are significantly lower than the national average[5]. The proposed growth can potentially exacerbate the issue as more household waste would be generated. However, densification in the City Centre and urban centres may help make more efficient technologies such as district heating systems more viable due to the economies of scale and higher densities. Overall, whilst the proposed growth will lead to increased household waste, the location of growth is unlikely to significantly influence the waste recycling rates or collection regimes (though it will be important to ensure adequate solutions for waste management at very high densities). However, this approach may facilitate more efficient district / neighbourhood wide energy systems and may provide more scope for incorporating water recycling systems into new buildings, but this remains uncertain at this stage. Therefore, uncertain **positive effects** are envisaged at this stage. There is an opportunity for the BLP to promote the use of water recycling/ reuse systems such as grey water systems within new buildings. The Plan can also promote the more energy efficient buildings to minimise energy use etc.

[5] DEFRA Statistics on waste managed by local authorities in England 2020/21

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_2) in 2010. The Council stated its commitment to reducing exposure levels in its Air Quality Action Plan (2021) and introduced a Clean Air Zone in June 2021. The latter operates in the central Birmingham area within the A4540 Middleway (excluding the ring road itself). The Clean Air Zone, which operates 24-hours a day, throughout the year has so far helped reduce NO_2 levels an average of 13% (compared to 2019 baseline)[6]. Whilst the Clean Air Zone and increased use of EV vehicles will help reduce vehicular emissions in the future, further growth in the City Centre and urban centres will inevitably lead to increased traffic and congestion and therefore likely to exacerbate the current air quality issues. It also places more new homes in areas at risk of experiencing poor air quality. Therefore, potential **negative effects** are envisaged at this stage. There is an opportunity through the BLP to promote further mitigation measures such as car free neighbourhoods, and more public transport provision (including low emissions public transport) to help reduce adverse effects.

12. **Water quality:** The additional growth proposed can potentially adversely impact the quality of water bodies in the City, none of which currently meet 'good' ecological status. Additional pollution is potentially likely from surface water runoff and treated wastewater effluent. This can potentially be mitigated through policy requiring the installation of SuDS and ensuring there is sufficient wastewater treatment capacity. Additionally, pollution from the additional development is generally less of problematic (provided adequate mitigation is in place) than that caused through agricultural (e.g. farm effluents, nutrients) and Industrial waste. The increased densification would potentially allow enhanced SuDS provision (e.g. blue infrastructure and permeable areas) by allowing more space for SuDS and improved permeability. Overall, with mitigation in place through BLP policies, significant negative effects can likely be avoided, leaving potential **negative effects** due to the additional pollution likely to be generated from surface run-off and combined sewer over-flow events.

[6] Clean Air Zone six month report (March 2022)

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:** The scale of growth involved is likely to create more vehicular traffic leading to increased congestion and emissions. On the other hand, the City Centre and urban centres are well connected by existing public transport infrastructure and contain the bulk of services, retail and employment.

15. Therefore, increasing densities in such locations is likely to be more sustainable as it would help reduce reliance on cars and encourage active travel (walking/ cycling) and public transport use. It also has the potential to facilitate enhanced and /or new transport infrastructure. Conversely increased housing densities in urban centres can exacerbate urban heat island effects which would lead to increased use of cooling/ air conditioning and increased emissions. The increased use of electric vehicles in future and the recently implemented clean air zone are also likely to lead to reductions in emissions in the City.

16. Therefore, the increased emissions associated with growth would be partly mitigated by sustainably located growth (with respect to transport and services) and improved transport infrastructure. The BLP has the potential to further reduce emissions through car-free zones, enhanced EV and active travel infrastructure. Plan policies can also promote the use of more sustainable building materials, more energy efficient building design and low carbon district heating / cooling systems and more projects such as the Tyseley Energy Park energy from waste plant. At this stage, this option is likely to contribute towards **positive effects** with regards to minimising per capita emissions.

17. **Flooding:** The higher urban densities approach can potentially reduce land area taken up by new development thus allowing more room for SuDS and enhanced permeability. The majority of the City Centre and urban centre areas are at low risk of flooding (flood zone 1). Therefore, **positive effects** are envisaged under this approach as the increased density within central locations may help to avoid the need to place developments within areas at greater risk of flooding. The BLP presents further opportunities to reduce flood risk through policies aimed at improving permeability, implementation SuDS and enhanced blue/ green infrastructure provision.

18. **Historic environment:** There are numerous heritage assets and 29 Conservation Areas within Birmingham. These are predominately concentrated within the City Centre and urban centres. Densification in such locations can potentially have negative effects on heritage as the higher densities may not be in keeping with the existing scale, massing and overall character of historic areas. Therefore, the potential for **significant negative effects** should be noted under this option at this high level of assessment. Having said this, there are locations that are less sensitive with regards to heritage across the City. Including within parts of the central areas where concentrations of heritage are highest. The effects that arise will be very dependent upon the location of sites and the nature of development. Furthermore, the Plan presents opportunities to conserve and bring back into use some of the heritage assets, including ones

that are currently on the at risk register. If this is carried out through a masterplanning approach with appropriate design, sensitive to the surrounding townscape and historic character, positive effects may be possible, but this remains uncertain at this stage.

19. **Natural landscape:** The densification of development in City Centre and urban centres is potentially beneficial as it is likely to reduce development pressure on areas of high landscape sensitivity outside the centres and in the countryside. Therefore, **positive effects** are envisaged under this option as it is likely to reduce encroachment on sensitive landscapes and the countryside (as well as possibly better protecting open space throughout the urban areas themselves).

20. **Biodiversity and geodiversity:** There are a number of areas within Birmingham that are protected for their nature conservation value including 2 Sites of Special Scientific Interest (SSSIs), National Nature Reserve (NNR) and 11 Local Nature Reserves (LNRs).

21. Additionally, there over 50 Sites of Importance for Nature Conservation (SINCs) comprising ancient woodlands, grasslands, lakes, streams, and other important wildlife habitats. These are generally located outside of the City Centre and urban centres. Therefore, the higher densities sought in centres under this option would potentially alleviate some of the development pressure on designated biodiversity sites elsewhere in Birmingham. However, there are Sites of Local Importance for Nature Conservation (SLINCs) within the City Centre along the canal network and the River Rea and development near these locations could potentially create additional disturbance and recreational pressures on biodiversity. Therefore, the positive effects associated with pursuing higher densities in centres could be offset by the potential for adverse effects on SLINCs within the City Centre resulting in **neutral effects** overall.

22. **Accessibility and transport:** This option is expected to have beneficial effects on accessibility as it focuses growth in central locations where the bulk of services, retail and employment opportunities exist. Furthermore, urban centres benefit from Birmingham's extensive transport links. The City is currently pursuing several initiatives aimed at enhanced/ expanded Metro, Bus and Sprint Rapid Transit links. HS2 will help reduce travel times between Birmingham and London which will further enhance accessibility to employment and education opportunities. In view of the above, potential **significant positive effects** are anticipated.

Option 2 More active public sector land assembly

23. Under this option the Council proposes to pursue a proactive approach to land assembly. This could help address the issue of land supply for development. The public sector can play an important role in unlocking sites by assembling parcels of land for development. This approach also has the potential to give the local planning authority some degree of control over shaping development including placemaking and the provision of affordable housing. The Council also expects larger sites to produce wider regeneration benefits through this option; though acknowledges there are few within the City. This option would entail acquiring land parcels (often in multiple ownerships) and assembling

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. **Equality, diversity and community development:** The land assembly approach would enable the Council to exercise greater influence in shaping developments in the City. However, effects would be largely dependent on the location of such developments and associated site specific polices. Having said that, the approach is likely to facilitate greater provision of affordable housing, particularly on larger sites which can be particularly helpful to more deprived households and those who are unable to afford suitable housing. In this respect the approach is **potentially positive** with respect to equality. The approach can also facilitate regeneration of more deprived neighbourhoods, particularly on larger inner city sites where some of the most deprived communities reside, though this is uncertain at this stage and would depend on the Council's ability to acquire and assemble the required sites in such locations.

26. **Health and wellbeing:** potentially **positive effects** are predicted for the reasons outlined in the preceding paragraph. The land assembly approach may facilitate regeneration of run down areas helping to improve their attractiveness and provide more affordable housing which would have positive impacts on the health and wellbeing of communities. The Council would also have more control over place making on such sites, including the provision of green space and community facilities which will have further positive effects. Again, this is largely dependent on the location of the resulting developments and site specific policies.

27. **Waste and resource use:** Under this approach the Council may be able to influence the design of developments including for example the recycling of existing buildings or reusing construction materials from existing structures in order to recycle embedded carbon and specifying more energy efficient design. Other options likely to have beneficial outcomes include the installation of water recycling systems (e.g. grey water systems), district heating and cooling systems and on site recycling facilities. This would largely depend on the site chosen and site specific policies, therefore uncertain **positive effects** are predicted at this stage.

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 of uncertainty until the sites are identified.

33. **Achieving zero carbon living:** As discussed under the other options the scale of growth proposed is likely to create more vehicular traffic leading to increased congestion and emissions. This approach may enable the Council to positively influence the development by promoting more energy efficient design, active travel /public transport infrastructure provision and sustainably located neighbourhoods (with respect to services and employment). Assembled sites can also provide opportunities for the provision of low carbon or more efficient district heating/ cooling systems. Therefore, the adverse effects associated with increased traffic are partly offset by the additional control this approach provides enabling the inclusion of more sustainable design, low carbon transport infrastructure and low carbon heating/ cooling systems but this would largely depend on the ability of the Council to acquire sufficient land parcels, in suitable locations and the implementation of site specific policies. Therefore, residual **negative effects** are predicted at this stage.

34. **Flooding:** Effects would largely depend on the location of sites but in general terms, the approach should provide more scope for the Council to implement SuDS and greater provision of green / blue infrastructure which would alleviate flood risk in the future. However, the number and location of sites likely to be assembled remain unknown at this stage and therefore **neutral effects** are predicted at this juncture.

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 net delivery of new housing as it would involve demolishing existing dwellings and replacing them with new ones on the same sites. A net increase in dwellings would only be possible if a higher density approach is applied to such sites.

Furthermore, this approach would initially lead to a reduction in available housing including affordable housing and social rents during the initial phases as existing housing is demolished and new housing constructed. This could take several years exacerbating the housing shortfall in the interim. On the plus side this approach could produce better quality housing with more community facilities and open space to provide a healthier environment to residents. Therefore, in the short term the effects are potentially **negative** (due to the initial reduction in housing stock) with **neutral or positive effects** on housing in the longer term.

42. **Equality, diversity and community development:** Following the initial period of demolition and construction this option can generate benefits on equality and community development as it is likely to improve the quality, choice, and potentially affordability, of housing for the community including those within the most deprived areas and households who rely on affordable / social rents. However, in the short term negative effects are possible as there would be a decrease in overall housing stock which would disproportionately impact those in the most need for social housing. Therefore, mixed effects are likely: short term **negative** ones due to the initial decrease in housing with **positive effects** in the longer term due to the improved quality of housing, improved environment, community facilities and open space.

43. **Health and wellbeing:** Localised beneficial effects on health and wellbeing are likely under this approach. The regeneration of rundown estates is likely to produce better quality housing, community facilities and more open space which would have beneficial effects on local residents in the long run. However, there are potential adverse impacts in the short/ medium term during the demolition and construction works as existing residents may lose their homes and need to be suitably re-homed in the interim. The extent of potential regeneration is unknown at this stage, but effects (positive or negative) are likely to be localised and small scale (compared to the overall scale of growth proposed) therefore **neutral effects** are predicted at this stage.

44. **Waste and resource use:** Under this approach the Council would be able to influence the design of developments including for example the recycling of existing buildings or reusing construction materials from existing structures and specifying more energy efficient design. Other options likely to have beneficial outcomes include the installation of water recycling systems (e.g. grey water systems), district heating and cooling systems and on site recycling facilities. However, any such benefits are likely to be relatively small scale and localised, therefore **neutral effects** are predicted at this stage.

45. **Economy and employment**: The greater potential for regeneration may have positive consequences on improving the attractiveness of previously run down areas which may improve land values and attract more investment to the regenerated areas. However, effects are likely to be localised and therefore, significant effects are considered unlikely (**neutral effects**).

46. **Air quality:** The approach has limited scope to impact air quality and may result in localised deterioration in air quality during the demolition/ construction phases of regeneration. At this stage it is envisaged that any effects would be localised, and small scale compared to the overall scale of growth proposed which will inevitably lead to increased traffic. Therefore, **negative effects** are envisaged at this stage due.

47. **Water quality:** The additional growth proposed in the BLP can potentially adversely impact the quality of water bodies through surface water runoff and treated wastewater effluent. The regeneration approach may provide beneficial mitigation measures such as the installation of SuDS and stricter specification aimed at limiting run off rates from new development. However, such measures are likely to be relatively small in scale compared to the overall growth and distribution of growth proposed in the BLP. As such, **neutral effects** are predicted overall.

48. **Land and soil:** The option is unlikely to produce significant effects as the regeneration would take place on existing estates and not produce a significant impact on the net new dwellings delivered. Whilst it is unlikely to significantly reduce the overall amount of housing required, it will help to improve stock, potentially increase density (and therefore reduce the shortfall), and would take place in urban areas, helping reduce pressure on greenfield sites. Therefore, minor **positive effects** are predicted at this stage.

49. Achieving zero carbon living: Under this approach the Council can positively influence the regenerated estates by promoting more energy efficient design and active travel /public transport infrastructure.

50. The option presents opportunities to incorporate low carbon or more efficient district heating/ cooling systems. However, any such effects are likely to be localised and small in scale and therefore unlikely to significantly impact the adverse effects associated with the overall scale of development proposed. Consequently, neutral effects are predicted at this stage.

51. Flooding: The approach may produce beneficial localised effects where SuDS are implemented, and green/ blue infrastructure are provided within development. However, the effects are not expected to be significant therefore neutral effects are predicted at this stage.

52. **Historic environment:** The effects would be dictated by the location and size of regenerated sites. Locations in less constrained areas are less likely to give rise to adverse effects. The approach presents opportunities to improve rundown areas providing designs that are more sympathetic in design and character to surrounding areas and potentially improving the attractiveness of estates located in proximity to heritage assets. However, such effects are likely to be relatively small and localised compared to the overall scale of growth proposed. The option is unlikely to lead to the complete avoidance of development in heritage constrained locations, but likewise, regeneration areas are unlikely to be affected in a negative way in terms of heritage. Therefore, **neutral / uncertain effects** are predicted.

53. **Natural landscape:** effects would be largely dependent on the location of regeneration sites. If these are focused on areas of low landscape sensitivity, then adverse effects would be less likely. The approach may also give the Council more say in the design, layout and landscaping of regenerated estates. However, effects are likely to be localised and small in scale producing **neutral effects** overall.

54. **Biodiversity and geodiversity:** The regeneration approach is unlikely to produce significant effects as these would be localised within existing estates. There may be opportunities to improve the amount and connectivity of GI.

However, for the reasons discussed above, the approach is unlikely to result in the complete avoidance of growth in environmentally constrained locations; therefore, **neutral effects** are predicted.

55. **Accessibility and transport:** As discussed above this option may present localised, small scale, opportunities to improve development within regenerated areas. For example, the integration of regenerated sites with existing walkways/ cycle routes and bus routes would be beneficial.

56. However, accessibility would be largely dependent on the actual location of sites and therefore effects are uncertain at this stage. Potential positive effects are likely to be localised and small in scale producing **neutral effects** overall.

Option 4 Utilise poor quality under-used open space for housing

57. This option involves identifying underused, poor quality open space that is currently of limited value and utilising it for residential development. The Council envisages that such sites would be in accessible locations.

58. **Housing**: This option is likely to produce beneficial effects with respect to housing as it is likely to boost land supply and help meet the housing growth required in the BLP. It may also enable the provision of more affordable housing, particularly on larger sites. Furthermore, the locations are likely to be in centrally located areas with good access to transport, services and employment. Therefore, this option is predicted to produce some **positive effects** as it is likely to boost land supply thus helping meet some of Birmingham's housing shortfall.

59. **Equality, diversity and community development:** Some of the open spaces likely to be utilised for this option are within the some of the more deprived areas of the City. The provision of more housing in such locations, particularly social affordable/ housing can be particularly helpful to more deprived households who are unable to afford suitable accommodation. In this respect the approach is **potentially positive** with respect to equality. The approach can improve accessibility to jobs, transport and service for the more deprived neighbourhoods. Having said that, there is a degree of uncertainty at this stage as the above would depend on the Council's ability to identify a sufficient number of open space sites to utilise.

60. Conversely, by changing open space sites to housing, it removes the amount of recreational in the urban area, and the potential for these to be enhanced for community use (despite these not being used proactively at this time). In this respect, potential **negative effects** are predicted.

61. **Health and wellbeing:** Mixed effects are likely; **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. The option may present opportunities to provide 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 approach. Any effects (positive or negative) would largely depend on the sites chosen and site specific policies, therefore **neutral effects** are predicted at this stage.

63. **Economy and employment**: The replacement of poor quality / underutilised open space may improve the attractiveness of previously run down areas. It may also help improve land values and attract more investment particularly if new development were to include higher quality open/ green spaces. These factors are likely to have generally positive effects on the economy.

64. The location of such sites in areas in close proximity to employment (e.g. City Centre and inner city areas) would help increase footfall in existing employment / commercial areas which could further improve the local economy and employment. Again, this would be largely dependent on the location and number of sites identified under this approach therefore, **uncertain positive effects** are predicted at this stage.

65. **Air quality:** The approach has limited scope to impact air quality though the overall 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.

66. **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. There may be opportunities to implement SuDS as part of new development, but this remains uncertain at this stage with **negative effects** predicted due to the additional pollution likely from surface run-off and combined sewer over-flow events.

67. **Land and soil:** This approach has potentially **positive effects** on land and soil as it will likely enhance housing provision in existing urban/ built-up areas, improving land supply and reducing the need to utilise high quality agricultural land elsewhere.

68. **Achieving zero carbon living:** As discussed under the other options the scale of growth proposed is likely to create more vehicular traffic leading to increased congestion and emissions. The effects associated with this approach would be largely dependent on the location of sites identified and site specific policies. There may be scope for new development to implement more energy efficient design and provide more active travel /public transport links, but this is uncertain at this stage. The location of sites under this option are generally sustainably located (with respect to services and employment) in accessible locations which would reduce the need to travel. Therefore, some of the adverse effects associated with increased traffic are partly offset by the more sustainable/ better connected locations. Therefore, neutral effects are predicted at this stage.

69. **Flooding:** This approach will result in the loss of open space within the City which could have adverse effects on permeability and may exacerbate surface water flood risk. There may be opportunities to implement SuDS and provide replacement green space but this is uncertain at this stage. Therefore, **negative effects** are predicted at this stage due to the loss of open space and associated impacts on flood risk.

70. **Historic environment:** Effects would be dictated by the location and size of sites utilised 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. However, given the scale of growth proposed and numerous heritage assets and conservation areas within the City, it is possible that development in heritage constrained locations would occur under this approach. Therefore, there could be some **negative effects** on the historic environment, particularly where open space contributes to the setting of heritage assets.

71. There is uncertainty at this stage, as effects will depend on the specific sites involved and the amount of open space sites that were released. A precautionary approach is taken at this high level of appraisal.

72. **Natural landscape:** Effects would be largely dependent on the location of sites identified. If these are focused on areas of low landscape sensitivity, then significant effects would be less likely. That said, open space constitutes an important aspect of landscape and townscape therefore its loss can potentially substantially alter the character of the landscape. Additionally, the removal of open space may result in some loss of amenity to nearby residents/ receptors. Conversely, the approach may present opportunities to improve current landscape through the provision of higher quality open/ green spaces.

73. Overall, uncertain mixed effects are predicted at this stage: potentially **negative effects** are predicted due to the loss of amenity and change to the existing landscape/ townscape character with potential **positive effects** as the approach my help reduce encroachment on areas of high landscape sensitivity (outside of the urban area) and may engender improvements by providing higher quality open/ green space.

74. **Biodiversity and geodiversity:** Effects would be dependent on the location of sites selected for development. The approach is likely to lead to some loss of urban greenspace, which potentially includes natural / semi-natural and artificial habitats that occur frequently in urban settings, such as parks and community gardens, wasteland (derelict/ unmanaged), amenity or recreational greenspaces etc. Such areas often have an important role to play in reducing habitat fragmentation and retaining some connectivity between habitats in developed areas. Therefore, this option may lead to **negative effects**, though there is scope for new development to offset some of the fragmentation by providing new kinds of habitats such as community woodland and by linking green spaces to facilitate the movement of species.

75. **Accessibility and transport:** This option is likely to engender positive effects on accessibility as the sites would be in accessible locations benefitting from the city's extensive public transport links (Bus, Metro, Sprint Rapid Transit and HS2). Therefore, **positive effects** are predicted at this stage.

Option 5 Utilise some employment land for housing

76. This option involves converting some of the City's employment land for mixed use or residential use. Some of the city's employment land is poor quality and under occupied and so might present opportunities to be redeveloped for other uses.

77. **Housing**: This option is likely to produce beneficial effects with respect to housing as it is likely to boost housing land supply thus contributing towards the housing growth required in the BLP. It may also enable the provision of more affordable housing, particularly on larger sites. Furthermore, the land involved is well located with respect to transport and employment. Therefore, this option is predicted to produce some **positive effects**.

78. **Equality, diversity and community development:** The majority of the CEAs overlap some of the most deprived areas in the City. The provision of more housing in such locations, particularly social affordable/ housing can be particularly helpful to more deprived households who are unable to afford suitable accommodation. In this respect the approach is potentially positive with respect to equality. The approach can also improve accessibility to jobs as the sites would be located within employment areas and the locations are well connected to the roads and rail networks within Birmingham. However, some of the locations may not be well placed with respect of community services such healthcare and education which may adversely impact the ability of residents to access such services. Additionally, some of the locations may not lend themselves to active travel modes such as walking and cycling. Therefore, whilst some positive effects are likely due to improved housing provision and access to jobs this is counterbalanced by the potential lack of services and active travel networks leaving **neutral effects** overall.

79. **Health and wellbeing:** Mixed effects are likely; **positive ones** due to the enhanced housing provision (including affordable housing) and potentially **negative** implications due to the location of new housing within employment areas which may not be suited to residential use for example there may be issues around pollution or noise associated with remaining industrial/ commercial premises. Furthermore, some employment sites may not lend themselves to active travel such as walking/ cycling which could impact residents' health and wellbeing.

80. **Waste and resource use:** No direct significant effects are anticipated from this approach. Any effects (positive or negative) would largely depend on the sites chosen and site specific policies, therefore **neutral effects** are predicted at this stage.

81. **Economy and employment**: The approach will lead to some loss of employment land which could adversely impact future employment land supply. The planned transport improvements along with HS2 are likely to attract more businesses to the City which is likely to increase future employment land demand. Conversely, the introduction of residential and mixed-use sites within existing employment areas may provide a boost to businesses through the increased footfall generated. Additionally, the option may help bring back into productive use sites which may have been vacant for a long time with poor prospects of future employment use. Also, at a time of personnel shortage, businesses may potentially benefit from having a potential workforce pool in their immediate vicinity. The recent Birmingham Housing and Economic Development Needs Assessment (HEDNA)[7] which assessed employment land supply and demand up to 2042, estimated that there will be a gross need for 319 ha of land to 2042 (split into 23.5 ha offices and 295.6 ha industrial). When the employment land supply is taken into account a potential oversupply of

[7] Iceni Projects report (2022): Birmingham Housing and Economic Development Needs Assessment (HEDNA)

office employment land is predicted with a shortfall of 73.64 ha for industrial land, however the report adds that this can potentially be met from sites released from the HS2 works and / or the proposed West Midlands Interchange Site in South Staffordshire District.

82. Therefore, mixed effects are predicted at this stage with **positive effects** likely due to the increased footfall and proximity of potential workforce to employment locations and **uncertain negative effects** due to the potential loss in employment land. The latter may potentially be overcome by the release of HS2 (or other) land but this remains uncertain at this stage.

83. **Air quality:** The approach has limited scope to impact air quality though the overall housing growth will inevitably lead to increased traffic and congestion and therefore likely to exacerbate the current air quality issues. Whilst employment areas are well connected to the existing transport networks they may not be well connected or in close proximity to community services such schools and healthcare which makes walking/ cycling less likely thus increasing reliance on car journeys. Therefore, **negative effects** are envisaged at this stage.

84. **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. There may be opportunities to implement SuDS as part of new development, but this remains uncertain at this stage.

85. Given that much of the land involved is already likely to be previously developed, the potential for pollution and flooding issues are considered to be low, thus **neutral effects** are predicted.

86. **Land and soil:** This approach has potentially **positive effects** on land and soil as it will likely enhance housing provision in existing industrial/ commercial non-agricultural areas, improving land supply and reducing the need to utilise high quality agricultural land elsewhere.

87. **Achieving zero carbon living:** As discussed under the other options the scale of growth proposed is likely to create more vehicular traffic leading to increased congestion and emissions. Employment areas may not be within walking/ cycling distance from community services such as schools, shops and GP surgeries which may increase reliance on cars for such journeys. The effects would be largely dependent on the location of sites identified and site specific policies. There may be scope for new development to provide these community services locally, but this is uncertain at this stage. Conversely, the location of sites under this option are generally sustainably located with respect to roads/ railway transport and employment in accessible locations which would reduce the need to travel to work. However, the overall scale of growth proposed will inevitably lead to increased vehicular traffic and congestion with associated increases in emissions. Therefore, residual **negative effects** remain at this stage.

88. **Flooding:** This approach is not expected to produce significant effects therefore **neutral** effects are predicted. However, some employment uses are considered suitable in areas at risk of flooding, whilst residential development would not be. As such, a change of use in this respect could be negative.

89. **Historic environment:** effects would be dictated by the location and size of sites utilised 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. Employment land is less likely to contain heritage assets therefore the provision of housing here can potentially reduce pressure on other locations in more constrained locations (e.g. conservation areas).

90. However, given the scale of growth proposed and numerous heritage assets within the City, it is unlikely that development in heritage constrained locations can be entirely avoided. **Neutral effects** are predicted in relation to development within CEAs.

91. **Natural landscape:** Existing employment land is generally within less sensitive landscape areas therefore the introduction of residential development into such locations is unlikely to adversely impact the landscape. There may **be positive effects** as the approach can help reduce encroachment on areas of high landscape sensitivity.

92. **Biodiversity and geodiversity:** Employment land is generally less environmentally constrained; therefore, this approach is unlikely to lead to adverse effects and would potentially help reduce development pressure on other more constrained areas. Therefore, this option could have some **positive effects** overall.

93. **Accessibility and transport:** This option is likely to engender some positive effects on accessibility as the sites would be in accessible locations benefitting from the city's extensive public transport links (Bus, Metro, Sprint Rapid Transit and HS2).

94. However, this is offset by the potential lack of walking/ cycling infrastructure within the employment locations and the lack of community services such as healthcare and education within employment areas. Therefore, **neutral effects** are predicted overall at this stage.

Option 6 Release Green Belt for housing

95. This option proposes Green Belt release for new residential development. The majority of Green Belt land is concentrated within the north and north east of Birmingham but there are smaller Green Belt areas (green wedges) to the east, west and south west along the city's boundary. The Green Belt covers around 15% of the total area of Birmingham. The adopted BDP set a precedent for Green Belt release, proposing a 6,000 dwelling sustainable Urban Extension (SUE) in the green belt at Langley in Sutton Coldfield, north east of Birmingham.

96. **Housing**: This option is likely to produce beneficial effects with respect to housing as it is likely to boost housing land supply thus contributing towards the housing growth required in the BLP. It may also enable the provision of more affordable housing, particularly on larger sites and could provide a different type of housing than would be possible at higher densities in the City. Whilst the locations are relatively remote from the rest of the City, development in the form of SUE's would partly compensate for this by providing necessary infrastructure and community services (e.g. health, education and retail) and some of the locations are in close proximity to local centres (e.g. Sutton Coldfield).

Importantly, this option may be critical to fulfilling the unmet housing need, as such, it is predicted to produce **likely significant positive effects** on housing.

97. **Equality, diversity and community development:** Whilst there are relatively small areas of deprived neighbourhoods in the north east, the majority of Green Belt areas are less deprived than more central locations in Birmingham. In this context development in the Green Belt is less likely to help those in the most deprived locations.

98. However, large schemes (e.g. Langley SUE) can provide more affordable housing, new employment opportunities and new community services which would be particularly beneficial to the deprived households in Birmingham. However, this would only apply to large scale SUE schemes, smaller scale development within the Green Belt may not be well placed with respect to employment and community services (e.g. healthcare and education) which may adversely impact the ability of residents to access such services. Therefore, whilst some positive effects are possible due to improved housing provision and access to jobs and services, this would depend on the location and size of development proposed which remains unknown at this stage. Therefore, **neutral effects** are predicted overall.

99. **Health and wellbeing:** Large scale development within the Green Belt has the potential to produce attractive new neighbourhoods with better provision of open green space and active travel infrastructure, particularly if these are in the form of SUEs. Furthermore, the enhanced housing provision, including affordable housing would have beneficial impact on health and wellbeing. However, these positive effects are offset by the negative effects associated with the net loss of open/ green space, particularly in areas of high landscape value (e.g. in Sutton Coldfield). Therefore, mixed effects are likely; **positive ones** due to the enhanced housing provision (including affordable housing) and potentially **negative** implications due to loss of high quality green/ open space which is currently underprovided in Birmingham.

100. **Waste and resource use:** No direct significant effects are anticipated to arise specifically due to this approach. Any effects would depend on the relevant BLP site specific policies, therefore **neutral effects** are predicted at this stage.

101. **Economy and employment**: The approach may produce some new employment, retail and offices if a mixed use SUE development approach is implemented. The boost in housing would also help support future economic growth. Therefore, **positive effects** are envisaged.

102. **Air quality:** The overall housing growth will inevitably lead to increased traffic and congestion and therefore likely to exacerbate the current air quality issues. Green Belt locations could potentially be less accessible to facilities and services by sustainable modes, and this could lead to increased car trips and associated air quality issues. These are potential minor **negative effects**.

103. **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. There may be opportunities to implement SuDS as part of new development, but this remains

uncertain at this stage with **negative effects** predicted due to the additional pollution likely from surface run-off and combined sewer over-flow events.

104. **Land and soil:** Under this option there would some loss of non-urban land in the Green Belt areas some which is best and versatile agricultural land (BVM) including grades 2 and 3a area in the north east of the City. This is likely to be significant if the proposed sites are similar in scale to the Langley SUE scheme. Therefore, this approach has **likely significant negative effects** on land and soil due to the encroachment on non-urban land within the green belt in locations likely to contain high quality agricultural land.

105. **Achieving zero carbon living:** As discussed under the other options the scale of growth proposed is likely to create more vehicular traffic leading to increased congestion and emissions. The Green Belt areas may not be within walking/ cycling distance from community services such as schools, shops and GP surgeries which may increase reliance on cars. The relative remoteness of the potential sites from existing employment and the larger centres may lead to greater reliance on cars. Conversely if development is to take the form of large scale SUEs then these would provide significant new community services and infrastructure which could reduce reliance on cars and may facilitate modal shift. That said, the overall scale of growth proposed will inevitably lead to increased vehicular traffic and congestion with associated increases in emissions. Therefore, residual **negative effects** are likely to remain.

106. **Flooding:** Some Green Belt locations are in areas of low flood risk. Though there are areas that contain flood zone 2 and 3, it is presumed that these would be sequentially avoided. Therefore, this approach is predicted to have **neutral effects**.

107. **Historic environment:** Green Belt areas within Birmingham present varied sensitivities with regards to heritage. Though the number of assets is reduced compared to urban areas, there are still sensitive assets such as scheduled monuments and listed buildings near or within potential development locations. It is considered unlikely that these assets would be directly affected, but there is certainly the potential for the setting of assets to be affected, as open countryside is important to several of these historic features. On the other hand, if less sensitive Green Belt locations are involved, it could help to take pressure from the urban areas where the prevalence of heritage is much higher. On balance, given the relative shortage of open space around the urban areas, it is considered that some residual **negative effects** on the historic environment would arise. It is unclear whether these would be significant, as the precise locations are unknown at this stage.

108. **Natural landscape:** The Green Belt locations are varied in relation to landscape sensitivity. However, much of the remaining areas contain parcels 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 **significant negative effects** is higher in this respect. Smaller piecemeal development could be more acceptable from a landscape perspective but would be more likely to have poor accessibility (which is contrary to the NPPF).

[8] Green belt assessment (2013)

Again, the effects will depend on the exact location and extent and nature of growth.

109. **Biodiversity and geodiversity:** The Green Belt locations include a number of habitats of moderate to high ecological values including (to varying extents) Local Nature Reserves, Sites of Special Scientific Interest (SSSI), Sites of Importance for Nature Conservation (SLINCs) and Tree Preservation Orders (TPOs). Therefore, this option is likely to lead to some development in environmentally constrained locations with potentially **negative effects** on biodiversity. That said, there may be scope for mitigation in the form of providing new, connected green spaces and seeking biodiversity net gain within new development schemes.

110. **Accessibility and transport:** Generally speaking, growth in Green Belt locations would be in proximity to suburban areas with either poor or reasonable access to facilities and services. There are also locations where the existing road infrastructure is congested particularly at peak times. Also, the choice of travel modes may be limited which may lead to increased car journeys due to the relative remoteness from the main employment sites in Birmingham. Furthermore, walking/ cycling infrastructure is likely to be more limited. Therefore, some **negative effects** are envisaged. Larger scale developments such as SUEs may provide the scale of investment required to enhance existing infrastructure and provide new transport services, but this remains uncertain at this point.

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 fall within flood risk zones 2 and 3, as well as being at risk of surface water and groundwater flooding. Development here could therefore have negative effects.

However, given the need to apply a sequential approach with regards to flood risk, and the less sensitive nature of some employment land uses, it is anticipated that effects would not be significant.

Historic environment: Effects would be dictated by the location and nature of sites identified. If sites are located in less constrained areas (away from heritage assets/ conservation areas) adverse effects would be less likely to occur. For example, 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.

Employment Option 2 Accommodate the shortfall within other authorities in the wider Housing Market Area (HMA):

This option would involve working with other authorities within the wider Housing Market Area (HMA) to address the shortfall. The Council would discuss this with other HMA 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.

Housing: There are unlikely to be significant effects on housing under this option. However, less requirement to deliver surplus employment could open opportunities to promote housing on land within the City, which is a potential **positive effect**.

Equality, diversity and community development: Effects would depend on the locations of employment sites. If these are in areas in proximity to more deprived areas in neighbouring authorities (in the HMA), there may be beneficial effects associated with improved accessibility to new employment opportunities (however, this would not necessarily have direct effects in Birmingham unless deprived communities can access these jobs). If employment sites are distant from the more deprived areas and are not accessible via commuting for Birmingham residents, then there are less likely to be any beneficial effects for the City itself. At this stage, potential **minor negative effects** are predicted, as opportunities to access jobs could be more difficult for certain communities in Birmingham that have less social mobility.

Health and wellbeing: Effects depend on the location of the additional employment land, however as these are expected to be met outside of Birmingham itself, it is considered unlikely that significant effects would arise for the health of residents in Birmingham itself. Therefore, neutral effects are predicted.

Waste and resource use: Employment will generate waste and use resources during construction and operation, regardless of location. However, in terms of how resources and waste are managed, if the shortfall in employment land is met outside of Birmingham, it would mean that lower amounts of waste are generated in the City itself and fewer resources utilised. This could be considered a **positive effect** for Birmingham, but the effects would be very minor, and depending upon waste disposal and recycling arrangements, waste could very well be brought back into the City to be processed (which would not be effective with regards to the movement of waste).

Economy and employment: Accommodating the employment land shortfall outside the City may have adverse effects on the local economy and employment (In Birmingham itself), but this would not be anticipated to be significant given the existing stock of employment land and pipeline development in the City. Furthermore, provision within the HMA is also likely to have direct / indirect economic benefits for Birmingham due to growth produced in the regional / HMA economy. Therefore, effects are predicted to be **minor positive**. Such an approach may also offer better opportunities to identify high quality employment land if the scope of sites is widened beyond Birmingham City itself.

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 flood risk in the City itself. The nature of effects in the wider HMA are difficult to predict without knowing the location of development (and is beyond the scope of this SA).

Historic Environment: Effects would be dictated by the location and nature of sites identified. If sites are located in less constrained areas (away from heritage assets/ conservation areas) adverse effects would be less likely to occur. Generally existing employment areas (in the City or wider HMA) are less likely to contain heritage assets therefore the provision of further employment land here can potentially reduce pressure on other more constrained locations leading to positive effects. However, land could be identified in greenfield locations in the wider HMAs. For the City itself, the reduced need to identify land for employment would most likely be beneficial for heritage, as it would reduce pressure to develop locations that are more sensitive (whether this be for employment or housing). Therefore, minor positive effects are predicted).

Natural landscape: The existing employment areas are generally in less sensitive landscape areas therefore locating more employment land in such locations is unlikely to adversely impact the landscape. If new land is involved, this could lead to negative effects, but this is an uncertainty, and the effects would be outside of Birmingham City itself (though potentially on the periphery) From a Birmingham perspective, this approach could reduce pressure to release Green Belt land (whether this be for housing or employment), and so is potentially **positive** with regards to landscape.

Biodiversity and geodiversity: Effects would be dependent on the location of sites selected for development in the wider HMA. From a Birmingham perspective, this approach would reduce pressure to release land in sensitive locations (whether this be for housing or employment, and so potentially is **positive** with regards to biodiversity).

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.

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