

## Birmingham City Council

# Sustainability Appraisal of the Birmingham Development Plan

Sustainability Appraisal Report of the Pre-Submission BDP



AMEC Environment & Infrastructure UK Limited

October 2013

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**Birmingham City Council****Sustainability Appraisal  
of the Birmingham  
Development Plan**

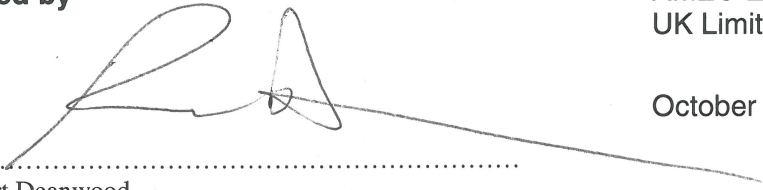
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Sustainability Appraisal Report of the  
Pre-Submission BDP

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October 2013

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# Non-Technical Summary

## Background to, and Purpose of, this Report

This document is the Sustainability Appraisal (SA) Report prepared to accompany the pre-Submission version of the Birmingham Development Plan (BDP). The regulations contained within the Planning and Compulsory Purchase Act and the guidance set out in the NPPF identify that SAs should meet the requirements of EU Directive 2001/42/EC, Strategic Environmental Assessment (SEA), otherwise known as the ‘SEA Directive’. The SEA Directive requires the iterative assessment of the effects of certain plans and programmes on the environment. In this context, the Directive’s main areas of emphasis are to contribute to the integration of environmental considerations into the preparation and adoption of plans to promote sustainable development.

The purpose of the SA Report is to promote sustainable development through the integration of sustainability considerations into proposed BDP. This SA Report has been issued for consultation alongside the pre-submission draft of the BDP to gather the views of statutory consultees and members of the public prior to the adoption of the Plan. In addition to reporting the results of the assessment, the Report sets out proposed mitigation measures to enhance the sustainability performance of the BDP and a monitoring framework to track the performance of the BDP against significant sustainability issues identified as part of the assessment.

## Evolution of the Sustainability Appraisal

This SA Report is the latest stage in the appraisal process which has accompanied the evolution of the Birmingham Development Plan, the previous reports being:

- Sustainability Appraisal Scoping Report (2006, revised 2010 and 2012);
- Interim Sustainability Appraisal of Issues and Options (2008);
- Interim Sustainability Appraisal of Preferred Options (2010);
- Interim Sustainability Appraisal of Options Consultation (December 2012); and
- Interim Sustainability Appraisal of Proposed Site Allocations (September 2013).

## The BDP Strategy: Sustainability Analysis

The spatial strategy proposed by the BDP centres on regeneration-led growth, supported by limited strategic allocations on greenfield land which, along with development spread across adjacent authorities, help to meet the overall housing need for the City. Table 1 sets out an appraisal of the performance of the strategic approach of the BDP against the SA Objectives which, for this exercise, have been grouped by theme.

**Table 1 Appraisal of the Performance of the BDP against SA Objectives**

SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
1. Natural resources and waste	<p><b>1. Resource Use:</b> Use natural resources such as water and minerals efficiently.</p> <p><b>7. Waste Reduction and Minimisation:</b> Encourage and enable waste minimisation, reuse, recycling and recovery.</p> <p><b>8. Efficient use of land:</b> Encourage land use and development that optimises the use of previously developed land and buildings.</p>	<p>The Scale of Growth</p> <p>Climate Change</p> <p>Green Belt and Green Infrastructure</p>	<p>The intended scale of growth over the next 20 years, if properly managed, should contribute to greater efficiency in the use of land through the regeneration of brownfield sites, for example. The relatively compact nature of the City provides a useful template for future development.</p>	<p>In order to avoid inefficient use of scarce land resources, there will have to be particular attention paid to the co-ordination of site development. This will need to include dialogue with adjacent authorities over, for example, the functioning of Birmingham International Airport as part of the City's growth aspirations, and the channelling of regeneration efforts into the Black Country.</p> <p>The need to use greenfield land to meet the City's housing requirement is a significant, but probably unavoidable negative effect, although one which can be mitigated through design of a SUE and integration with existing communities.</p>
2. CO <sub>2</sub> emissions	<p><b>2. Sustainable design, construction and maintenance:</b> Promote and ensure high standards of sustainable resource-efficient design, construction and maintenance of buildings, where possible exceeding the requirements of the Building Regulations.</p> <p><b>3. Renewable Energy:</b> Encourage development of alternative and renewable resources.</p> <p><b>4. Energy Efficiency:</b> Reduce overall energy use through energy efficiency.</p> <p><b>5. Sustainable Transport:</b> 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.</p> <p><b>6. Reduce the need to travel:</b> Ensure development reduces the need to travel.</p> <p><b>9. Reduce climate change:</b> Minimise Birmingham's contribution to the causes of climate change by reducing emissions of greenhouse gases from transport, domestic, commercial and industrial sources.</p>	<p>The Scale of Growth</p> <p>Climate Change</p> <p>The City Centre</p> <p>Modernising Infrastructure</p> <p>Quality of Life</p>	<p>There is the opportunity to pioneer the introduction of technologies which help to reduce per capita emissions as part of new development.</p>	<p>Overall CO<sub>2</sub> emissions could well increase associated with population and economic growth. This will require monitoring and co-ordination with complementary City-wide strategies such as the Climate Change Strategy. There is the potential for contradiction between the aspirations for Birmingham to be a world city, and the impacts of the increased travel that this is likely to generate.</p>

SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
3. Climate change adaptation	<b>10. Manage Climate Change:</b> Implement a managed response to the unavoidable impacts of climate change, ensuring that the design and planning process takes into account predicted changes in Birmingham's climate including flood risk.	Climate Change Green Belt and Green Infrastructure	There are significant opportunities for the Birmingham Plan to contribute climate change adaptation across the City through the siting of development and its design.	Care will have to taken to ensure that the capacity of the City to adapt to climate change impacts is not compromised by growth plans.
4. Historic environment, landscape, biodiversity and geodiversity	<b>12. Built and Historic Environment:</b> Value, protect, enhance and restore Birmingham's built and historic environment and landscape. <b>13. Natural Landscape:</b> Value, protect, enhance and restore Birmingham's natural landscape. <b>14. Biodiversity:</b> Value, protect, maintain, restore and re-create local biodiversity and geodiversity.	The City Centre Mature Suburbs Quality of Life	Growth brings the opportunity to enhance the quality of natural and cultural assets through attention to the siting and quality of development. Commitments to the protection of natural and cultural assets and the provision of green infrastructure should provide a sound basis for moving forward.	Growth in Birmingham of the scale proposed could well place pressures on the City's natural resources, given their relatively limited extent. Particular attention will therefore need to be paid to ensuring that any compromises in how natural resources are used yield a net gain.
5. Pollution	<b>15. Air Quality:</b> Minimise air pollution levels and create good quality air. <b>16. Water Quality:</b> Minimise water pollution levels and create good quality water. <b>17. Soil Quality:</b> Minimise soil pollution levels and create good quality soil. <b>18. Noise:</b> Minimise noise pollution levels.	The Scale of Growth Climate Change	Overall pollution levels have been declining and this has the potential to continue as a result of the use of high standards of new development, modal shift in transport towards more walking and cycling and public transport provision to reduce dependence on the private car.	Growth in the population and activity of the City could contribute to increased pollution levels, notwithstanding increases in walking and cycling and efficiencies in transport provision.
6. Economic growth	<b>20. Economy and Equality:</b> Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants. <b>21. Learning and Skills:</b> Promote investment in future prosperity, including ongoing investment and engagement in learning and skills development.	The Scale of Growth The Network of Local Centres Corridors The High-Tech Belt and RIS Core Employment Areas Modernising Infrastructure Quality of Life	Economic growth provides the opportunity to ensure that the City benefits in a wide range of respects, including distribution amongst all sectors of society and the renewal of infrastructure.  The spatial division of these benefits will need particular scrutiny to ensure that the most is being made of existing and potential assets. For example, monitoring of the effect of concentrating activity in corridors will be required.	Careful attention will have to be paid to ensuring that all sectors of Birmingham's population benefit from greater economic activity.



SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
7. Communities, healthy lifestyles and equality	<p><b>11. Sense of Place:</b> Encourage land use and development that creates and sustains well-designed, high quality built environments that incorporate green space, encourage biodiversity, and promote local distinctiveness and sense of place.</p> <p><b>19. Social and Environmental Responsibility:</b> Encourage corporate social and environmental responsibility, with local organisations and agencies leading by example.</p> <p><b>22. Community Involvement:</b> Enable communities to influence the decisions that affect their neighbourhoods and quality of life.</p> <p><b>23. Equality:</b> Ensure easy and equitable access to services, facilities and opportunities, including jobs and learning.</p> <p><b>24. Poverty:</b> Address poverty and disadvantage, taking into account the particular difficulties of those facing multiple disadvantage.</p> <p><b>25. Health:</b> Improve health and reduce health inequalities by encouraging and enabling healthy active lifestyles and protecting health.</p> <p><b>26. Crime:</b> Reduce crime, fear of crime and antisocial behaviour.</p> <p><b>28. Culture/Sport/Recreation:</b> Improve opportunities to participate in diverse cultural, sporting and recreational activities.</p>	<p>The Scale of Growth</p> <p>Green Belt and Green Infrastructure</p> <p>Sustainable Neighbourhoods</p> <p>Mature Suburbs</p> <p>Quality of Life</p>	<p>The aspirations to create a world city based on significant housing and economic growth should create opportunities to create a more liveable city, whilst not compromising the quality of what already exists. The creation of Sustainable Neighbourhoods should make a significant contribution towards achieving greater self-sufficiency, in turn contributing towards securing environmental targets. The initiative holds the potential to be the focus for a range of City-wide strategies which together will work towards sustainability aspirations.</p>	<p>The impacts of development will have to be scrutinised against a range of indicators over the medium to long term, recognising that there could be unfulfilled aspirations and a range of unintended consequences such as greater inequality amongst some groups or areas of the City.</p>
8. Housing	<p><b>27. Housing:</b> Provide decent and affordable housing for all, of the right quantity, type, tenure and affordability to meet local needs.</p>	<p>The Scale of Growth</p> <p>City Centre</p> <p>Quality of Life</p>	<p>The housing growth aspired to should create opportunities to provide for a greater choice of, and access to, housing across the City.</p>	<p>The location and type of new housing will have monitored to ensure that the housing delivered meets needs and does not compromise other objectives such as the maintenance and improvement of quality of life.</p>

## Sustainability Performance of the BDP Policies including Cumulative, Secondary and Synergistic Effects

The BDP's proposals for delivering growth across the City in a balanced fashion reflect the aspirations of the NPPF for delivering sustainable development. The NPPF identifies that: *"The purpose of the planning system is to contribute to the achievement of sustainable development"* (paragraph 6), that *"Local Plans are the key to delivering sustainable development that reflects the vision and aspirations of local communities"* (paragraph 150), and that: *"local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three"* (paragraph 152). The BDP seeks to demonstrate how these aspirations might be achieved in the context of significant growth in levels of



housing and employment, making best use of existing assets, notably brownfield land and the potential for investment in strategic transport infrastructure to improve the functioning of the City.

The sustainability performance of the policies is largely positive, with many significant positive relationships and no instances of significant negative effects. The principle of a regeneration-led strategy, advocated by the BDP since the issues and options stage represents a logical and justifiable strategy approach for a City the size and complexity of Birmingham which contains significant tracts of brownfield land and communities in need of regeneration. These redevelopment opportunities already exist or will become available as part of the development cycle, along with areas which require rejuvenation, economically, socially and environmentally to varying degrees.

Many sustainability problems result from the progressive accumulation of small and indirect effects and the failure to address these can induce further changes, notably the deterioration in housing quality, local retail decline and absence of open space management. There is inevitable uncertainty associated with trying to anticipate these interactions and impacts, but where negative effects are predicted, these reflect the likely impacts of growth in respect of additional resource use, waste generation and pollution. To an extent, these are inevitable by-products of growth, although as intended in a number of implementation policies, can be mitigated through striving for higher standards of building design and encouraging behavioural change in transport habits, for example.

Overall the BDP will help to deliver sustainable development for the City, directly and indirectly improving quality of life for residents, workers and visitors through the creation of a housing stock and services which better match needs, job and wealth creation which fit the City's multiple economic roles, a sustainable transport system, and an environmental setting which responds to the demands of growth and the challenges associated with climate change. These aspirations will be supported by various corporate initiatives to support sustainable growth, notably Leading Green City (March 2013) which sets out an ambitious vision for re-casting Birmingham's environmental footprint through energy generation and use and travel behaviour, and supporting strategies<sup>1</sup>.

The impacts of the BDP proposals acting and in combination with those of adjacent authorities will require close monitoring. The BDP relies upon neighbouring authorities for the delivery of its growth and these requirements will inevitably impact upon sustainability issues in these areas, notably on greenfield land take, traffic generation and service provision. Growth across the sub-region and region as a whole resulting from the plans of all authorities (albeit at different stages) is likely to result in a greater strength and complexity of cross-area commuting patterns, with consequences for key indicators such as air quality, congestion and neighbourhood coherence. The extent to which these impacts can be managed will depend upon the effectiveness of mitigation policies in BPD and other plans (such as those promoting a modal shift and greater self-containment) and their close monitoring will be required.

As part of the assessment no significant negative effects were encountered, reflecting the pragmatic tone of the policies and the balanced approach to sustainable development which is being strived for. The assessment, perhaps inevitably, is characterised by numerous instances of uncertainty, either in the relationship between policies and sustainability objectives or whether a particular effect will be realised. This reflects the contingent nature of spatial planning, which relies on wider interactions such as economic health. However, the BDP seeks to create the

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<sup>1</sup> Your Green and Healthy City SPD (2013); Birmingham's Health and Well-being Strategy (2013); Birmingham's Green Living Spaces Plan (2012)

framework within which there can be balanced economic growth whilst providing for the needs of existing and future residents, in the context of environmental protection and enhancement.

In light of fulfilling the demands of the NPPF for sustainable development, one area of particular uncertainty is the extent to which, through the Duty to Co-operate, the City's development requirements can be met. The BDP proposes that around 30,000 dwellings will be provided in adjacent areas, seeking to reflect the interrelationship between the City of Birmingham and its surrounding city-region as evidenced through patterns of commuting, strategic employment and provision of retail and cultural services<sup>2</sup>.

There are significant uncertainties over the likely sustainability implications of accommodating around 30,000 dwellings in surrounding authorities, given the absence of detail at this stage of where this portion of Birmingham's housing need might go. It is understood that exploration of strategic housing and employment provision across the City region is being undertaken through the LEP planning process, and conclusions on the appropriate spatial balance of development could be reached which support or modify the aspirations of the BDP.

## Consultation on the SA Report

This SA Report will be published for consultation alongside the Pre-Submission Birmingham Development Plan. Copies of the previous SA documents referred to in this SA Report can be found at: [www.birmingham.gov.uk/](http://www.birmingham.gov.uk/)

Comments on this SA Report should be sent to:

Strategic Planning, Birmingham City Council, 1 Lancaster Circus, Birmingham B4 7DJ  
[strategic.planning@birmingham.gov.uk](mailto:strategic.planning@birmingham.gov.uk)

Responses must be received by **XXXXXX**

## Submission and Examination of the BDP

Following the end of the consultation on the BDP and the accompanying SA Report, any substantive changes made to the BDP will be appraised and a final SA Report will accompany the BDP to independent examination.

## Finalising the SA Report and Post Adoption Statement

Following adoption of the BDP, a SA Post Adoption Statement will be produced, setting out the following:

- how environmental considerations have been integrated into the BDP;
- how the SA Report has been taken into account;
- how opinions expressed in relation to the BDP and SA Report have been taken into account;
- the reasons for choosing the BDP as adopted, in light of the reasonable alternatives considered; and
- the measures to be taken to monitor any significant environmental effects associated with implementation of the BDP.

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<sup>2</sup> See Roger Tym & Partners (January 2013) **Birmingham Strategic Housing Market Assessment**, chapter 13

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# 1. Introduction: Background and Purposes of the Sustainability Appraisal/Strategic Environmental Assessment

## 1.1 The Requirement for Sustainability Appraisal/Strategic Environmental Assessment

This document is the Sustainability Appraisal (SA) Report prepared to accompany the pre-Submission version of the Birmingham Development Plan (BDP). The regulations contained within the Planning and Compulsory Purchase Act and the guidance set out in the NPPF identify that SAs should meet the requirements of EU Directive 2001/42/EC, Strategic Environmental Assessment (SEA), otherwise known as the ‘SEA Directive’. The SEA Directive requires the iterative assessment of the effects of certain plans and programmes on the environment. In this context, the Directive’s main areas of emphasis are to contribute to the integration of environmental considerations into the preparation and adoption of plans to promote sustainable development. The SEA Directive and SEA Regulations that transpose the Directive into UK Law, state that the SEA must consider the following topic areas:

- biodiversity;
- population;
- human health;
- flora and fauna;
- soil;
- water;
- air;
- climate change;
- material assets;
- cultural heritage; and
- landscape.

The SEA Directive defines environmental assessment as a procedure comprising:

- the preparation of an Environmental Report on the likely significant effects of the draft plan or programme;

- undertaking consultation on the draft plan or programme and the accompanying Environmental Report;
- taking into account the Environmental Report and the results of consultation in decision making; and
- providing information when the plan or programme is adopted showing how the results of the assessment have been taken into account.

SEA is required to be undertaken alongside the preparation of the plan to which it relates to allow alternatives to be incorporated, ensuring that environmental, social and economic implications are taken account of in emerging strategies and policies.

Although the SA and SEA process are separate appraisals, it is possible to combine these processes into a single assessment (as per the guidance set out in the NPPF). This single assessment is able to cover significant environmental, social and economic effects of implementing plans or programmes.

The Sustainability Appraisal (SA) incorporates the requirements of the Strategic Environmental Assessment (SEA) Directive and has been undertaken in line with former guidance issued by ODPM (2005) in '*Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents*'.

## 1.2 Purpose of this Report and Background to the Appraisal

The purpose of the SA Report is to promote sustainable development through the integration of sustainability considerations into proposed BPD. This SA Report has been issued for consultation alongside the pre-submission draft of the BDP to gather the views of statutory consultees and members of the public prior to the adoption of the Plan. In addition to reporting the results of the assessment, the Report sets out proposed mitigation measures to enhance the sustainability performance of the BDP and a monitoring framework to track the performance of the BDP against significant sustainability issues identified as part of the assessment.

This SA Report is the latest stage in the appraisal process which has accompanied the evolution of the Birmingham Development Plan, the previous reports being:

- Sustainability Appraisal Scoping Report (2006, revised 2010 and 2012);
- Interim Sustainability Appraisal of Issues and Options (2008);
- Interim Sustainability Appraisal of Preferred Options (2010);
- Interim Sustainability Appraisal of Options Consultation (December 2012); and
- Interim Sustainability Appraisal of Proposed Site Allocations (September 2013).

## 1.3 Report Structure

The remainder of this Report is structured as follows:

- chapter 2 sets out the methodology used to undertake the appraisal;
- chapter 3 details the sustainability issues in Birmingham and the sustainability appraisal framework developed to help assess the influence that the BDP is likely to have on them;
- chapter 4 considers the BDP, its evolution and the principal aspects of the Plan - its objectives, strategy and policies – which are to be appraised;
- chapter 5 sets out the results of the appraisal of the BDP;
- chapter 6 analyses the overall effects of the BDP and proposed mitigation and monitoring measures; and
- chapter 7 details the next steps in the appraisal process.

## 1.4 Consultation

### How to Comment on this SA Report

This report has been issued for consultation alongside the Publication Birmingham Development Plan. In particular, we would like to hear your views as to whether the effects which are predicted (see sections 5.2 and 5.3 of this report) are likely and whether there are any significant effects which have not been considered.

Comments should be sent to:

**Planning Strategy  
Development Directorate  
Birmingham City Council  
1 Lancaster Circus  
Birmingham  
B4 7DJ**

**Email:** [planningstrategy@birmingham.gov.uk](mailto:planningstrategy@birmingham.gov.uk)

The deadline for commenting on this report is **XXXX**

Further information about the Birmingham Development Plan can be found on the Council's website at:  
[www.birmingham.gov.uk/BDP](http://www.birmingham.gov.uk/BDP)





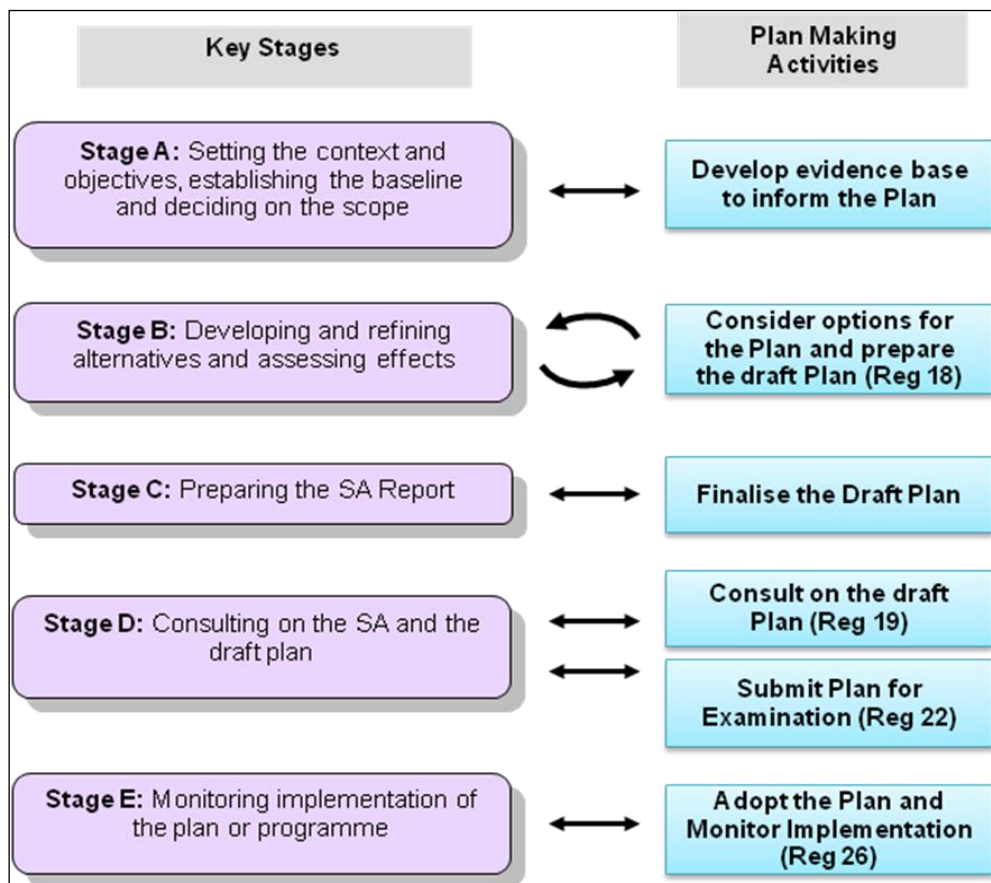
## 2. Appraisal Methodology

### 2.1 The Approach to the Assessment

The approach adopted to the assessment of the BDP has sought to meet the requirements of both SEA and SA (**chapter 7** sets out how the requirements of the SEA Directive have been met in the preparation of this report) and from this point forward, reference to SA in this report should be taken as including SEA.

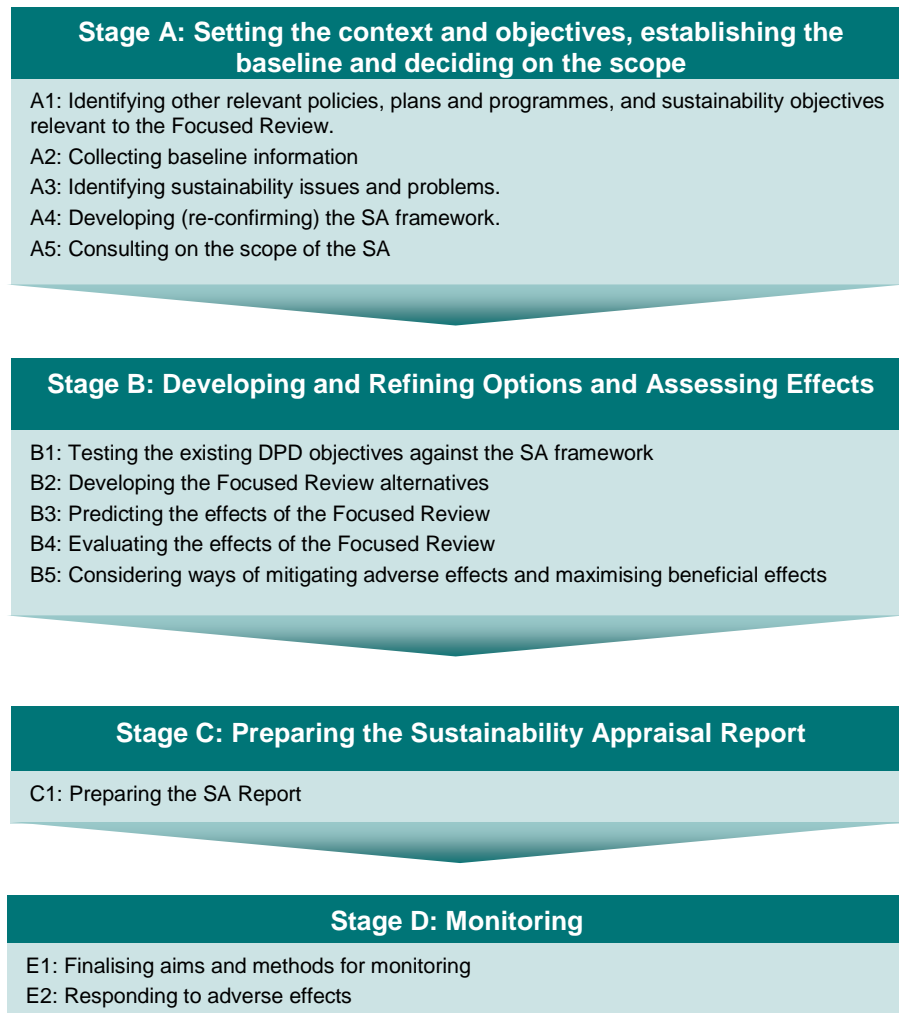
There are five key stages in the SA process which are shown in Figure 2.1 together with their relationship with the development of the BDP.

**Figure 2.1 Stages of the SA Process (as identified in ODPM Guidance)**



The approach adopted for the assessment of the DPD has sought to meet both the requirements of Sustainability Appraisal and Strategic Environmental Assessment. An integrated SA and SEA process can be defined as ‘an appraisal of the economic, environmental and social effects of a plan from the outset of the preparation process to allow decisions to be made that accord with sustainable development’. The stages involved in this process are outlined in Figure 2.2.

**Figure 2.2 Detail of the Sustainability Appraisal Stages**



## 2.2 Geographic and Temporal Scope

The spatial scope the SA principally relates to administrative area of the City of Birmingham, but also takes into account sub-regional, regional and national impacts where appropriate. Birmingham's position as the principal settlement of the West Midlands means that its environmental, social and economic role and impact reach far beyond its immediate boundaries, with attendant implications for key sustainability issues such as carbon emissions, housing provision and wealth creation. The assessment considers sustainability issues and effects in relation to the short term (1-5years), medium term (5-10 years) and longer term, (10-20years), the latter being the intended lifespan of the BDP (to 2031).

## 2.3 Habitats Regulations Assessment

The Habitats Directive (92/43/EEC) requires ‘appropriate assessment’ of plans and projects that are likely to have a significant impact on Natura 2000 sites (Special Protection Areas and Special Areas of Conservation). This Directive was passed into UK law under The Conservation (Natural Habitats, &c.) Regulations 1994, which proposed that Appropriate Assessment did not apply to land use plans. However, a judgement from the European Court of Justice found that this interpretation was incorrect and failed to properly transpose the European provisions into UK law, and that appropriate assessment does apply to land use plans. Therefore the 1994 Regulations have been amended to make appropriate assessment of relevant plans and strategies a requirement where a significant effect on a Natura 2000 site is likely.

Guidance on Appropriate Assessment states that plans should be ‘screened’ to determine whether appropriate assessment would be necessary. This is undertaken by assessing whether the LDF is likely to be significant effects on a Natura 2000 site through the policies and proposals contained within it. This screening determination should take into account the qualities of the Natura 2000 sites in the area, as well as their vulnerabilities.

Birmingham City Council has undertaken a HRA Screening<sup>3</sup> to determine whether significant effects are likely on European designated sites.

## 2.4 Review of Plans, Policies and Programmes

The updated Scoping Report (Autumn 2012) reviewed plans, policies and programmes in order to establish the economic, environmental and social objectives contained within them, allowing key sustainability drivers and synergies to be identified. The BDP has a direct and indirect relationship with a wide range of international, national, regional and local plans and is likely to support or interact with these. Appendix A sets out this review, based on the documents set out in Table 2.1. Some of the programmes established at EU level have required the preparation of various separate strategies, notably the River Basin Management Plans under the Water Framework Directive and air quality management plans under the Air Quality Directive. A variety of local plans have been prepared within Birmingham in advance of the BDP, including Area Action Plans for Longbridge, Aston and Bordesley and the City Centre Masterplan. These form a central part of the BDP’s area-based regeneration strategy.

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<sup>3</sup> UE Associates (2010) **HRA Screening of the Birmingham Plan**

**Table 2.1 List of reviewed plans, programmes and strategies**

### International

- EU (1992) Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EEC, Habitats Directive).
- EU (1996) Ambient Air Quality Assessment and Management (96/62/EC, Air Quality Framework Directive 2008/50/EC).
- EU (2000) Directive on Establishing a Framework for Community Action in the Field of Water Policy (2000/60/EC, The Water Framework Directive).
- EU (2001) Directive on Electricity Production from Renewable Energy Sources (2001/77/EC).
- EU (2005) Clean Air Strategy.
- EU (2008) Directive on Waste (2006/12/EC, Waste Framework Directive).
- UNFCCC (1997) Kyoto Protocol to the UN Framework Convention on Climate Change.
- UNFCCC (2009) Copenhagen Accord (Climate Change).
- Council of Europe (2006) European Landscape Convention
- Council of Europe (1985) Convention on the Protection of the Architectural Heritage of Europe
- EU (1991) Urban Waste Water Treatment Directive.
- European Commission (1999) The Landfill Directive.
- EC (2007) Together for Health: A Strategic Approach for the EU 2008-2013
- The Pan-European Biological and Landscape Diversity Strategy (1995)

### National

- CLG (2005) Planning Policy Statement 10:  
Planning for Sustainable Waste Management.
- CLG (2010) Five-year housing land supply coverage in England
- CLG (2012) National Planning Policy Framework (NPPF)
- NPPF – Biodiversity, Geodiversity & Soil
- NPPF – Landscape
- NPPF – Cultural Environment
- NPPF – Water
- NPPF – Climate Change
- NPPF – Air Quality
- NPPF – Minerals and Waste
- NPPF – Economy
- NPPF – Housing
- NPPF – Health
- NPPF – Transport & Accessibility
- NPPF – Quality of Life
- CLG (2011) The Localism Act

CLG (2011) The Community Infrastructure Levy Regulations

DECC (2008) UK Climate Change Act 2008.

DECC (2009) UK Renewable Energy Strategy 2009.

DCMS (2007) Heritage Protection for the 21<sup>st</sup> Century.

Defra (2002) Working with the Grain of Nature: A Biodiversity Strategy for England.

Defra (2003) The Water Environment (Water Framework Directive) (England and Wales) Regulations

Defra (2007) Guidance for Local Authorities on Implementing Biodiversity Duty

Defra (2007) Conserving Biodiversity: The UK Approach (The UK Biodiversity Action Plan)

Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 2).

Defra (2007) Waste Strategy for England 2007.

Defra (2008) Future Water, the Government's Water Strategy for England 2008.

Defra (2009) Safeguarding our Soils: A Strategy for England

Defra (2011) Natural Environment White Paper; The natural choice: securing the value of nature

Defra (2011) Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services

Defra & HM Government (2011) Water White Paper; Water for Life

DTI Micro Generation Strategy (2006)

HM Government (2010) The Air Quality Standards 2010

HM Government (2012) Draft Water Bill

DfT (2008) Delivering a Sustainable Transport System (DaSTS).

English Heritage (2008) Conservation Principles, Policies and Guidance

English Nature: Climate Change Space for Nature (2006)

Environment Agency (2009) Water for people and the environment - Water resources strategy for England and Wales.

Forestry Commission (2005): Trees and Woodlands Nature's Health Service

HM Government (2006) Climate Change The UK Programme

HM Government (2009) Low Carbon Transition Plan: National Strategy for Climate and Energy.

HM Government (2010) The Conservation of Habitats and Species Regulations 2010

## Regional

Severn Trent Water Resources Management Plan (2010)

Sustainability West Midlands (2011) Local Authority Low Carbon Economy Programme

The Greater Birmingham and Solihull Local Enterprise Partnership (2010)

## Local

Birmingham City Council (2012) Aston, Newtown and Lozells Area Action Plan

Birmingham City Council & Bromsgrove District Council(2009) Longbridge Area Action Plan

Birmingham City Council (1997) Nature Conservation Strategy for Birmingham

Birmingham City Council (1999) Regeneration Through Conservation: Birmingham Conservation Strategy.

Birmingham City Council (2001) Affordable Housing SPD

Birmingham City Council (2004) Archaeology Strategy.

Birmingham City Council (2005) Developing Birmingham: An Economic Strategy for the City 2005-2015.

Birmingham City Council (2006) Access for People with Disabilities SPD

Birmingham City Council (2006) Air Quality Action Plan.

Birmingham City Council (2006) Municipal Waste Management Strategy.

Birmingham City Council (2010) The Birmingham Area Investment Prospectus.

Birmingham City Council (2008) Birmingham Private Sector Housing Strategy 2008+ (updated 2010).

Birmingham City Council (2008) Contaminated Land Inspection Strategy for Birmingham Second Edition

Birmingham City Council (2008) Statement of Community Involvement

Birmingham City Council (2010) Birmingham Climate change action plan 2010+

Birmingham City Council (2011) Birmingham Big City Plan City Centre Masterplan

Birmingham City Council (Jan 2012) Level 1 & 2 Strategic Flood Risk Assessment

Birmingham City Council (2012) Places for the Future SPD

Birmingham City Council (2013) Birmingham's Green Living Spaces Plan

Birmingham City Council (2013) Birmingham Health and Well-being Strategy

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## 2.5 Baseline Review and its Evolution without the Plan

The Scoping Report reviews the current state of the environment, economy and society and trends across the City. This assists with the identification of issues and opportunities which should be addressed through the BDP, and with ongoing monitoring as the BDP is implemented. The baseline data assembled in the Scoping Report provides an evidence base for identifying sustainability issues across the City, and directly informs the SA Framework (section 3.1) and subsequent assessment of the way in which the BDP is likely to contribute to sustainable development. Table 2.2 summarises the key sustainability issues and opportunities identified in the Scoping Report and the baseline data assembled for the Scoping Report is set out in Appendix C.

The SEA Regulations require that information is provided on “... *the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.*” Where possible trends in the baseline data are described, and their evolution is taken to mean a continuation of the existing Unitary Development Plan.



**Table 2.2 Key Sustainability Issues Identified in the Scoping Report**

Sustainability Theme	Key Sustainability Issues
1. Resource Use	<p>New additional water management measures or water resources needed to ensure there is sufficient water for new housing proposed in the current and revised Regional Spatial Strategy.</p> <p>Resource Use is linked to issues related to water quality.</p>
2. Sustainable Design, Construction and Maintenance	<p>There are several examples of good design in Birmingham, but more could be done in the future to regenerate certain parts of the City.</p> <p>Sustainable Design, Construction and Maintenance is linked to issues related to energy efficiency, climate change mitigation and adaptation and housing.</p>
3. Renewable Energy	<p>Use of renewable energy could be significantly improved.</p> <p>Renewable Energy is linked to issues related to climate change mitigation and adaptation.</p>
4. Energy Efficiency	<p>Recent developments have shown evidence of energy efficiency, but the large number of old properties in the City will need improving to make them more energy efficient, building on current initiatives.</p> <p>Energy Efficiency is linked to issues related to renewable energy, sustainable design construction and maintenance, housing and social and environmental responsibility.</p>
5. Sustainable Transport	<p>Although the city has good public transport infrastructure, it needs expanding and upgrading to help minimise the high level of car use in Birmingham. A commitment is set out to achieve this. Emphasis will be placed on 'smarter travel', discouraging unnecessary journeys and encouraging people to use public transport. Congestion is a significant issue at certain times on both road and rail.</p> <p>Sustainable Transport is linked to issues related to air quality, reducing the need to travel, health, climate change mitigation and adaptation.</p>
6. Reducing the Need to Travel	<p>A very small proportion of people who work and live in the city (one tenth) 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.</p> <p>Reducing the need to travel is linked to issues related to sustainable transport, air quality, health, climate change mitigation and adaptation and noise.</p>
7. Waste Reduction and Minimisation	<p>Landfill diversion rates are increasing in the City, and past targets for recycling have been met.</p> <p>The percentage of waste sent to landfill within the City has declined between 2002/03-2010/11 from 23% to 10.37%. Given European and National targets it is likely this trend will continue.</p> <p>Waste Reduction and Minimisation is linked to issues related to air quality, soil quality, natural landscape and built and historic environment.</p>
8. Efficient Use of Land	<p>Good use is being made of previously developed land as a very high proportion of new housing and office development has taken place on previously developed land.</p> <p>Efficient Use of Land is linked to issues related to soil quality, natural landscape, built and historic environment, biodiversity culture, sport and recreation and sense of place.</p>
9. Reducing Climate Change	<p>Birmingham's residents and businesses emit over 6.6 million tonnes of CO<sub>2</sub> per year. If global emissions are not reduced Birmingham could see average annual temperatures rise by 1.5°C by 2020 and winter rise by 1.3°C and 3.7°C and 2.9°C 4.5°C by 2080.</p> <p>Reducing Climate Change is linked to issues related to sustainable transport, reducing the need to travel, air quality, biodiversity health and natural landscape.</p>
10. Managing Climate Change	<p>Birmingham City Council has a good record of taking on board Environment Agency comments in terms of permitting development in flood risk areas. There is limited information on this objective although it is recognised by the City Council that measures will need to be put in place to manage the unavoidable impacts of climate change.</p> <p>Managing Climate Change is linked to issues related to sustainable transport, reducing the need to travel, air quality, biodiversity health and natural landscape.</p>

Sustainability Theme	Key Sustainability Issues
11. Sense of Place	<p>Birmingham people are positive about their city; according to the Community Cohesion Strategy, opinion polls show that three quarters of people think it is a good place to live. No public open space is currently being lost, and environmental improvements have been made and continue to be made to various parts of the City.</p> <p>Sense of Place is linked to issues related to built and historic environment, natural landscape, housing, health, biodiversity, culture, sport and recreation and crime.</p>
12. Built and Historic Environment	<p>Birmingham has a large amount of land designated as Conservation Areas, some of which are nationally recognised such as the Jewellery Quarter and Bourneville. The City also has an extensive number of archaeological remains Listed Buildings and Registered Parks &amp; Gardens.</p> <p>Built and Historic Environment is linked to issues related to sense of place, housing, sustainable design, construction and maintenance, crime and poverty.</p>
13. Natural Landscape	<p>Although much of Birmingham is built up, there is a significant amount of open land within the City including areas of agricultural land to the north east and south west of the City. The City falls within the National Character Areas (NCAs) of Arden to the south and Cannock Chase and Cank Wood to the north. The assessment of these areas for the Countryside Quality Counts project for Natural England indicates that they are subject to a high rate of change. Most of Birmingham is built up, but 15% of the City is designated as Green Belt.</p> <p>Natural landscape is linked to issues related to biodiversity, health, soil quality, sense of place, culture, sport and recreation, climate change mitigation and adaptation.</p>
14. Biodiversity and Geodiversity	<p>The City has 2 SSSIs and a number of other designated sites which cover approximately 10% of the City.</p> <p>The West Midlands Biodiversity Partnership has developed a number of area based projects which look at different ways of protecting biodiversity by reducing fragmentation of habitats and species. These areas are known as Biodiversity Enhancement Areas. In such areas biodiversity should improve.</p> <p>There is one Local Nature Reserve designated in order to protect its geodiversity.</p> <p>Biodiversity is linked to issues related to air quality, soil quality, water quality, natural landscape, health).</p> <p>Geodiversity is linked to issues related to water quality, soil quality and natural landscape.</p>
15. Air Quality	<p>Air quality is an issue 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. Given the allocation of an AQMA, air quality should improve within the City.</p> <p>Air Quality is linked to issues related to biodiversity, health, sustainable transport reducing the need to travel, climate change mitigation and adaptation).</p>
16. Water Quality	<p>The chemical and biological quality of rivers and waterways in Birmingham is generally poor compared to the West Midlands and England as a whole.</p> <p>Water Quality is linked to issues related to resource use, soil quality, health, biodiversity, climate change mitigation and adaptation).</p>
17. Soil Quality	<p>There is very little high quality soil due to the built-up nature of Birmingham; however there are some small areas of Grade 3 agricultural land in the north of the City. The history of land use within the City including landfill sites, extensive manufacturing and transport leads to the potential for land contamination.</p> <p>Soil Quality is linked to issues related to biodiversity, waster quality, natural landscape, and health.</p>
18. Noise	<p>Noise pollution is a problem in some parts of the city, with Birmingham airport and traffic being the principal sources. It is anticipated this trend will continue.</p> <p>Noise is linked to issues related to sustainable transport and housing.</p>
19. Social and Environmental Responsibility	<p>No information has been identified on this topic.</p> <p>Social and Environmental Responsibility is linked to issues related to equality, community involvement, learning and skills, economy and equality, waste reduction and minimisation.</p>

Sustainability Theme	Key Sustainability Issues
20. Economy and Equality	<p>Birmingham is the major employment centre for the West Midlands Recent trends show an increase in service sector jobs, a continued decline in manufacturing jobs and an increase in unemployment.</p> <p>Birmingham still has a high proportion of economically inactive people e.g. students, people caring full-time for relatives. Unemployment is higher than the national average. The economic activity rate for Black and Minority Ethnic residents is far higher than that for white residents.</p> <p>There is significant disparity in terms of average household income between Birmingham's constituencies.</p> <p>Economy and Equality is linked to issues related to poverty, learning and skills, equality, housing and community involvement.</p>
21. Learning and Skills	<p>The proportion of people in Birmingham with few or no qualifications is above the national average, but improvements are being made in educational achievement. The percentage of Birmingham residents with a NVQ Level of 3 or above has been increasing since 2002<sup>4</sup>.</p> <p>The percentage of residents on Job Seekers Allowance has increased significantly since November 2007. Whether this trend will continue is likely to depend on wider national economic trends.</p> <p>Learning and Skills is linked to issues related to economy and equality, community involvement, equality, poverty and social and environmental responsibility</p>
22. Community Involvement	<p>Birmingham experiences very varied election turnouts from constituency to constituency, ranging from a 44.2% in Ladywood, to a 60.4% in Sutton Coldfield. The Sustainable Community Strategy indicates that in 2006, 40% of people agreed that they can influence decisions that affect their local area, an improvement of 22% from 2004.</p> <p>Community Involvement is linked to issues related to economy and equality, learning and skills, poverty, sense of place and housing.</p>
23. Equality	<p>Birmingham has a relatively youthful population composed of people from a wide variety of national, ethnic and religious backgrounds. There are inequalities relating to access to services such as to jobs and health services, which are partly to do with geographical location, but partly to do with social and economic disadvantage. There is generally good accessibility in most places at most times for those households without a car, due to the extensive bus network. Two particular problems have been identified with access for unemployed people to attend job interviews and with access to major NHS hospitals by public transport.</p> <p>Equality is linked to issues related to economy and equality, learning and skills, community involvement, poverty, crime and housing.</p>
24. Poverty	<p>About 40% of Birmingham's residents live in areas that are in the most deprived 10% in England. Concentrations are very high in wards to the east, north and west of the City Centre and also in Tyburn and Kingstanding Wards to the north of the M6 motorway. Unemployment rates are above the national average.</p> <p>Poverty is linked to issues related to health, crime, community involvement, learning and skills and equality.</p>
25. Health	<p>The number of residents feeling in poor health is higher than the national average, and people in Birmingham have generally less healthy lifestyles than the English average. Life expectancy in Birmingham is below the England average.</p> <p>Health is linked to issues related to air quality, water quality, biodiversity, natural landscape, culture, sport and recreation, equality and crime.</p>
26. Crime	<p>Birmingham has the lowest overall crime rate of the eight major English cities. There have been over 5,300 less victims of crime based on figures for April to June 2012, compared to the same period in 2009.</p> <p>Crime is linked to issues related to poverty, equality, learning and skills and housing.</p>
27. Housing	<p>Birmingham faces several issues relating to housing: there are large numbers of homeless people, social housing is in need of updating and relocating, and the number of households is increasing.</p> <p>House prices in Birmingham peaked in January 2008 and sharply declined through to 2010, and now have stabilised. Clearly however sales volumes have declined by over 50% since October 2006. This suggests that the affordability of housing for poorer families and first-time buyers has declined due to other national economic conditions.</p> <p>Housing is linked to issues related to poverty, equality, built and historic environment, natural landscape, sense of place, resource use, energy efficiency and sustainable design, construction and maintenance.</p>

<sup>4</sup> [https://www.nomisweb.co.uk/reports/Imp/1a/2038431965/subreports/quals\\_time\\_series/report.aspx](https://www.nomisweb.co.uk/reports/Imp/1a/2038431965/subreports/quals_time_series/report.aspx)

<b>Sustainability Theme</b>	<b>Key Sustainability Issues</b>
28. Culture/Sport/Recreation	Birmingham has many strengths in this area and is internationally recognised for sports and exhibitions. The City's popularity amongst international visitors has increased and is now the fourth most popular city in the UK. Culture/Sport/Recreation is linked to issues related to health, poverty, community involvement, biodiversity, natural landscape, sense of place and efficient use of land.

### 3. Sustainability Objectives and Issues

#### 3.1 Development of the Sustainability Objectives and Framework

The sustainability objectives developed to help appraise the performance of the BDP have been informed by the baseline evidence, the consideration of the key sustainability issues for Birmingham, the review of plans and programmes and the comments received during the consultation of the SA Scoping Report. Broadly, the objectives present the preferred environmental, social or economic outcome which typically involves minimising detrimental effects and enhancing positive effects. They have been formulated to allow for an assessment of the key effects of the implementation of the BDP by covering key environmental, social and economic issues.

**Table 3.1 SA Objectives and Guide Questions**

SA Theme	SA Objectives	Guide Questions for the SA Will the Birmingham Development Plan help to ...	Principal SEA Directive Topic
1. Natural resources and waste	<b>1. Resource Use:</b> Use natural resources such as water and minerals efficiently.	<ul style="list-style-type: none"> <li>• Incorporate energy efficiency measures into new land use and developments, redevelopment and refurbishment?</li> <li>• Promote and support resource efficient technologies?</li> <li>• Reward efficient resource use?</li> <li>• Reduce water consumption?</li> </ul>	Material assets
	<b>7. Waste Reduction and Minimisation:</b> Encourage and enable waste minimisation, reuse, recycling and recovery.	<ul style="list-style-type: none"> <li>• Divert resources away from the waste stream, including the use of recycled materials where possible?</li> </ul>	Material assets
	<b>8. Efficient use of land:</b> Encourage land use and development that optimises the use of previously developed land and buildings.	<ul style="list-style-type: none"> <li>• Encourage the efficient use of land and minimise the loss of greenfield land?</li> <li>• Value and protect the biodiversity/geodiversity (of previously developed land and buildings)?</li> </ul>	Material assets
2. CO <sub>2</sub> emissions	<b>2. Sustainable design, construction and maintenance:</b> Promote and ensure high standards of sustainable resource-efficient design, construction and maintenance of buildings, where possible exceeding the requirements of the Building Regulations.	<ul style="list-style-type: none"> <li>• Reduce dependence on fossil fuels?</li> <li>• Increase the number of buildings which meet recognised standards for sustainability?</li> </ul>	Material assets
	<b>3. Renewable Energy:</b> Encourage development of alternative and renewable resources.	<ul style="list-style-type: none"> <li>• Reduce dependence on fossil fuels?</li> <li>• Promote and support the development of new high value and low impact technologies, especially resource efficient technologies and environmental technology initiatives?</li> <li>• Increase the proportion of energy generated from renewable and low carbon sources, including micro generation, CHP, district heating and transportation?</li> </ul>	Material assets
	<b>4. Energy Efficiency:</b> Reduce overall energy use through energy efficiency.	<ul style="list-style-type: none"> <li>• Reduce energy consumption?</li> </ul>	Material assets

SA Theme	SA Objectives	Guide Questions for the SA Will the Birmingham Development Plan help to ...	Principal SEA Directive Topic
	<b>5. Sustainable Transport:</b> 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.	<ul style="list-style-type: none"> <li>• Reduce road traffic congestion, pollution and accidents?</li> <li>• Encourage walking and cycling?</li> <li>• Reduce travel by private car?</li> <li>• Promote accessibility for disabled people?</li> </ul>	Material assets
	<b>6. Reduce the need to travel:</b> Ensure development reduces the need to travel.	<ul style="list-style-type: none"> <li>• Reduce traffic volumes?</li> <li>• Reduce average journey length?</li> </ul>	Material assets
	<b>9. Reduce climate change:</b> Minimise Birmingham's contribution to the causes of climate change by reducing emissions of greenhouse gases from transport, domestic, commercial and industrial sources.	<ul style="list-style-type: none"> <li>• Reduce emissions of greenhouse gases by reducing energy consumption?</li> </ul>	Climatic factors
3. Climate change adaptation	<b>10. Manage Climate Change:</b> Implement a managed response to the unavoidable impacts of climate change, ensuring that the design and planning process takes into account predicted changes in Birmingham's climate including flood risk.	<ul style="list-style-type: none"> <li>• Minimise the risk of flooding from rivers and watercourses to people and property?</li> <li>• Reduce the risk of damage to property from storm events?</li> <li>• Protect, enhance and extend green infrastructure resources?</li> <li>• Address climate change adaptation for biodiversity fragmentation?</li> </ul>	Climatic factors
4. Historic environment, landscape, biodiversity and geodiversity	<b>12. Built and Historic Environment:</b> Value, protect, enhance and restore Birmingham's built and historic environment and landscape.	<ul style="list-style-type: none"> <li>• Protect and enhance features of built and historic environment and landscape?</li> </ul>	Cultural heritage
	<b>13. Natural Landscape:</b> Value, protect, enhance and restore Birmingham's natural landscape.	<ul style="list-style-type: none"> <li>• Safeguard and enhance the character of the local landscape and local distinctiveness?</li> <li>• Improve the landscape quality and character of the countryside?</li> </ul>	Landscape
	<b>14. Biodiversity:</b> Value, protect, maintain, restore and re-create local biodiversity and geodiversity.	<ul style="list-style-type: none"> <li>• Use approaches that improve the resilience of natural systems such as linking fragmented habitats where possible?</li> <li>• Conserve and enhance natural/semi-natural habitats and conserve and enhance species diversity?</li> <li>• Lead to habitat creation delivering BAP priorities?</li> </ul>	Biodiversity, flora and fauna
5. Pollution	<b>15. Air Quality:</b> Minimise air pollution levels and create good quality air.	<ul style="list-style-type: none"> <li>• Improve air quality?</li> <li>• Reduce CO<sub>2</sub> emissions?</li> </ul>	Air
	<b>16. Water Quality:</b> Minimise water pollution levels and create good quality water.	<ul style="list-style-type: none"> <li>• Improve water quality?</li> </ul>	Water
	<b>17. Soil Quality:</b> Minimise soil pollution levels and create good quality soil.	<ul style="list-style-type: none"> <li>• Maintain and enhance soil quality?</li> <li>• Minimise the loss of soils to development?</li> </ul>	Soil
	<b>18. Noise:</b> Minimise noise pollution levels.	<ul style="list-style-type: none"> <li>• Cause noise pollution?</li> <li>• Propose mitigation measures to minimise noise pollution?</li> </ul>	Human health

SA Theme	SA Objectives	Guide Questions for the SA Will the Birmingham Development Plan help to ...	Principal SEA Directive Topic
6. Economic growth	<b>20. Economy and Equality:</b> Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants.	<ul style="list-style-type: none"> <li>• Encourage and support a culture of enterprise and innovation, including social enterprise?</li> <li>• Improve business development and enhance competitiveness?</li> <li>• Promote growth in key sectors?</li> <li>• Reduce unemployment, especially amongst disadvantaged groups?</li> </ul>	Population
	<b>21. Learning and Skills:</b> Promote investment in future prosperity, including ongoing investment and engagement in learning and skills development.	<ul style="list-style-type: none"> <li>• Ensure that Birmingham's workforce is equipped with the skills to access high quality employment opportunities suited to the changing needs of Birmingham's economy whilst recognising the value and contribution of unpaid work?</li> </ul>	Population
7. Communities, healthy lifestyles and equality	<b>11. Sense of Place:</b> Encourage land use and development that creates and sustains well-designed, high quality built environments that incorporate green space, encourage biodiversity, and promote local distinctiveness and sense of place.	<ul style="list-style-type: none"> <li>• Improve the satisfaction of a diverse range people with the neighbourhoods where they live?</li> </ul>	Population
	<b>19. Social and Environmental Responsibility:</b> Encourage corporate social and environmental responsibility, with local organisations and agencies leading by example.	<ul style="list-style-type: none"> <li>• Encourage local stewardship of local environments, for example enabling communities to improve their neighbourhoods?</li> <li>• Encourage good employee relations and management practices?</li> <li>• Encourage ethical trading?</li> </ul>	Population
	<b>22. Community Involvement:</b> Enable communities to influence the decisions that affect their neighbourhoods and quality of life.	<ul style="list-style-type: none"> <li>• Encourage local stewardship of local environments, for example enabling communities to improve their neighbourhoods?</li> <li>• Encourage engagement in community activities for example through the establishment of social and cultural facilities that address the needs of equalities groups?</li> <li>• Increase the ability of people to influence decisions?</li> </ul>	Population
	<b>23. Equality:</b> Ensure easy and equitable access to services, facilities and opportunities, including jobs and learning.	<ul style="list-style-type: none"> <li>• Promote environmental justice, recognising that deprived areas and disadvantaged communities are more likely to be affected by environmental damage and degradation?</li> <li>• Ensure that people are not disadvantaged with regard to ethnicity, gender, age, disability, faith, sexuality, background or location?</li> </ul>	Population
	<b>24. Poverty:</b> Address poverty and disadvantage, taking into account the particular difficulties of those facing multiple disadvantage.	<ul style="list-style-type: none"> <li>• Promote environmental justice, recognising that deprived areas and disadvantaged communities are more likely to be affected by environmental damage and degradation?</li> <li>• Reduce household poverty, especially the proportion of children living in poor households?</li> </ul>	Population
	<b>25. Health:</b> Improve health and reduce health inequalities by encouraging and enabling healthy active lifestyles and protecting health.	<ul style="list-style-type: none"> <li>• Help provide equitable access to health services?</li> <li>• Provide sufficient areas of accessible natural greenspace?</li> </ul>	Human health
	<b>26. Crime:</b> Reduce crime, fear of crime and antisocial behaviour.	<ul style="list-style-type: none"> <li>• Reduce crime?</li> <li>• Reduce the fear of crime amongst all social and cultural groups?</li> </ul>	Population



SA Theme	SA Objectives	Guide Questions for the SA Will the Birmingham Development Plan help to ...	Principal SEA Directive Topic
	<b>28. Culture/Sport/Recreation:</b> Improve opportunities to participate in diverse cultural, sporting and recreational activities.	<ul style="list-style-type: none"> <li>Encourage participation in sport and cultural activities for all the diverse communities in Birmingham?</li> </ul>	Population
8. Housing	<b>27. Housing:</b> Provide decent and affordable housing for all, of the right quantity, type, tenure and affordability to meet local needs.	<ul style="list-style-type: none"> <li>Reduce homelessness?</li> <li>Increase the range and affordability of housing for all social and cultural groups?</li> <li>Reduce the number of unfit homes?</li> </ul>	Material assets

### 3.2 Summary of Sustainability Issues and Opportunities in Birmingham

Key sustainability issues of relevance to Birmingham and its role within the wider City Region have been identified from the Scoping Report and the pre-submission BDP, with attendant opportunities identified. Table 3.2 summarises the key issues and opportunities which could be taken through the BDP (and other strategies and policies) to address these issues.

**Table 3.2 Key Sustainability Issues and Opportunities**

SA Theme	Key Issues	Opportunities and Interrelationships
SA Theme 1: Natural resources and waste	<p>The key impacts here are associated with the relationships between the level of growth proposed in the BDP Strategy and the significant demand for natural resources (minerals, water and land) and the production of waste.</p> <p><b>Minerals:</b> There will be a significant demand for minerals to derive building materials for the construction of new dwellings plus supporting employment development (such as new offices and factories) and infrastructure (roads for example). The impacts associated with the demand for minerals will include:</p> <ul style="list-style-type: none"> <li>Environmental impacts from mining and quarrying operations: to source the minerals there could be impacts associated with noise, air quality and ecology for example (although operational minerals sites will have controls to mitigate their impacts). These impacts are likely to be felt outside of Birmingham itself (where there are no active mineral workings) into neighbouring areas in the wider region (such as Staffordshire for example, which has a number of active mineral sites).</li> <li>Increased CO<sub>2</sub> emissions: associated with the transport of these materials and relating to the embodied energy involved in the creation of these materials, with CO<sub>2</sub> emissions a key contributor to global climate change. The transport of these materials may also have impacts locally associated with works traffic to and from sites (particularly on local air quality).</li> </ul> <p><b>Water:</b> There will be a significant demand for water to supply new homes, businesses and other users. However, according to Severn Trent, there is sufficient existing and planned supply “to support the significant growth</p>	<p>Support reductions in the volume and type of waste going to landfill.</p> <p>Support alternative methods of waste management, such as through waste minimisation and recycling.</p> <p>Encourage the re-use and recycling of construction waste in developments through planning conditions.</p> <p>Maximise the efficient use of land.</p> <p>Consider the effects of development on water quality, both surface water and groundwater.</p> <p>Encourage the use of SuDS in new development, and the re-use of rainwater.</p> <p>Attention to these issues and opportunities will help address climate change and the City’s responses to it, the protection of biodiversity, health and well-being of the population and the City’s economy through encouraging</p>

SA Theme	Key Issues	Opportunities and Interrelationships
	<p><i>projections for this zone</i><sup>5</sup> [the Birmingham Water Resource Zone]<sup>5</sup>.</p> <p><b>Land:</b> There will be a demand for land to accommodate the significant levels of development proposed. Land is also a valuable resource, particularly greenfield land which may have an agricultural, ecological, archaeological and recreational value when compared to vacant, underused or derelict brownfield sites within the existing urban area (although it is noted that brownfield sites may have ecological value too). The focus of SA Objective 8 is to ensure an efficient use of land through maximising the potential from brownfield sites rather than using greenfield ones but given the levels of growth proposed, particularly under higher growth options, there may be insufficient supply of brownfield sites to deliver this.</p> <p>The Strategic Housing Land Availability Assessment and Employment Land Capacity Study<sup>6</sup> identified that there are sufficient sites within the existing urban area to deliver the preferred option of 50,600 dwellings 2006-2026 (with an identified supply of around 50,000<sup>7</sup>) but that greenfield sites may therefore be required to deliver growth beyond this. A study into housing provision in the West Midlands identified greenfield options on the edge of Birmingham which could deliver a further 20,000 homes<sup>8</sup>:</p> <ul style="list-style-type: none"> <li>• 5,000 homes south of Birmingham (into neighbouring Bromsgrove);</li> <li>• 5,000 homes east of Birmingham; and</li> <li>• 10,000 homes south-east of Birmingham (into neighbouring Solihull).</li> </ul> <p>With respect to employment land there is considered to be a shortfall in land for B1 in the short term and B8 in the longer term. To respond to this shortfall may also require suitably located greenfield sites but this will need to link closely with new housing provision as this is likely to be the key driver for growth.</p> <p>An alternative to bringing forward greenfield sites to meeting higher growth targets could be to further intensify the existing urban area through higher densities and relaxation of policies protecting open spaces and the historic environment (i.e. the mature suburbs) however this could conflict with a number of other SA objectives with respect to local air quality through increased traffic congestion (SA Theme 5), Birmingham's ability to respond to climate change (see SA Theme 3) and to protect features of the historic and natural environment within the main urban area (SA Theme 4).</p> <p><b>Waste:</b> The level of development proposed will also increase waste. There are two types of waste considered here:</p> <ul style="list-style-type: none"> <li>• waste arising from the construction of new development (and therefore linked with an efficient use of natural resources); and</li> <li>• waste arising from the new homes, businesses and other uses once occupied.</li> </ul> <p>There are environmental impacts relating to the disposal of non-recyclable waste, where this needs to go to landfill. It is important to note that with respect to waste in the construction sector the Government has a target for zero waste to landfill by 2020 and at the local level BCC aims to reach a domestic recycling and composting rate 40% by 2026 (from a current level of around 30%). Consideration also needs to be given to the existing and planned capacity of waste disposal infrastructure to provide services to new development.</p>	<p>innovation.</p>

<sup>5</sup> Severn Trent Water Resources Management Plan

<sup>6</sup> Entec UK Ltd, September 2007 and subsequent updates

<sup>7</sup> 17,000 dwellings through extant planning consents and a further 32,000 deemed potentially developable in the future.

<sup>8</sup> Nathaniel Lichfield and Partners, Development of Options for the West Midlands RSS in Response to the NHPAU Report, October 2008.

SA Theme	Key Issues	Opportunities and Interrelationships
SA Theme 2: CO <sub>2</sub> emissions	<p>BCC is committed to securing reductions in CO<sub>2</sub> emissions, with the Sustainable Community Strategy setting a target for a 60 per cent reduction in emissions by 2026. The main source of emissions is likely to come from the built environment and transport, both of which are sources that the BDP can influence.</p> <p>New development will create an additional demand for energy to provide electricity, heating and cooling for the new homes, businesses, shops, schools and other buildings. Where this energy demand is met through power stations dependant on fossil fuels (coal fired power stations for example), rather than zero or low carbon systems<sup>9</sup>, this new development will lead to increases in CO<sub>2</sub> emissions, which cumulatively will contribute to global emissions and future climate change. It is important to note that just one per cent of the energy currently consumed in Birmingham is from zero and low carbon sources.</p> <p>The levels of growth proposed will increase the overall number of 'trips' within the City, for new residents to travel from their homes to work, access services, shops, leisure and recreation. Associated with economic growth in particular will be the associated growth in the transport of goods and labour. Where trips are reliant on petrol (or diesel) powered vehicles this could lead to significant increases in CO<sub>2</sub> emissions and therefore contribute to global emissions and future climate change. In addition to contributing to global CO<sub>2</sub> emissions, transport growth will also have impacts at the local and regional level, for example in relation to air quality and congestion, which are explored in more detail under SA Themes 5 and 6.</p> <p><i>Birmingham International Airport (BIA): Although outside of BCC's administrative boundary, BIA (which lies in Solihull Borough) and Birmingham are inextricably linked; the airport is central to aspirations for Birmingham to be seen as a 'global city' and to support economic growth with respect to international trade and tourism. A planning application for significant expansion of BIA was approved by Solihull Metropolitan Borough Council in 2009<sup>10</sup>. This application is for an extended runway, new air traffic control tower and improvements to the airport's supporting infrastructure. Essentially, the aim of these proposals is to provide BIA with the capacity to enable long-haul flights, seen as important to the regional economy in terms of promoting international trade, in-bound tourism and the Birmingham's aspiring role as a global city. Air travel is seen as a significant contributor to CO<sub>2</sub> emissions and future climate change. It is therefore an important factor when considering sustainability impacts given the potential contribution of an expanded airport to CO<sub>2</sub> emissions and global climate change (as a result of more capacity and more flights). The Environmental Statement states that CO<sub>2</sub> emissions are likely to increase by 37% to 2030 as a result of the current expansion proposals. This is not a straightforward issue for this SA and the BDP to address however because:</i></p> <ul style="list-style-type: none"> <li>• The airport is outside of Birmingham's authority boundary and within Solihull Metropolitan Borough limiting the scope for the BDP to have a direct influence on expansion (unless the expansion was into Birmingham).</li> <li>• An expanded airport could have a range of benefits for Birmingham, particularly in economic terms, which would need to be weighed against environmental concerns.</li> </ul>	<p>Use of renewable energy could be significantly improved.</p> <p>Although the city has good public transport infrastructure, it needs expanding and upgrading to help minimise the high level of car use in Birmingham. A commitment is set out to achieve this. Emphasis will be placed on 'smarter travel', discouraging unnecessary journeys and encouraging people to use public transport. Congestion is a significant issue at certain times on both road and rail.</p> <p>These measures will contribute to addressing climate change and ultimately the health and well-being of the population and success of the City's economy.</p>
SA Theme 3: Climate change adaptation	<p>Current evidence, based on a review of the potential impacts of climate change at the regional level and the draft Birmingham Climate Change Action Plan, suggests that the City will need to be prepared for a range of potential impacts including increases in flooding, summer droughts and a greater probability of extreme weather events (heat waves and extreme floods for example).</p>	<p>Ensure that specific adaptation measures are put in place, for example:</p> <ul style="list-style-type: none"> <li>• Directing development away from areas at risk of flooding.</li> </ul>

<sup>9</sup> Zero carbon systems include wind turbines, solar thermal and solar photovoltaic. Low carbon systems include air or ground source heat pumps or combined heat and power (CHP) for example.

<sup>10</sup> <http://www.solihull.gov.uk/planningservices/15089.htm>

SA Theme	Key Issues	Opportunities and Interrelationships
	<p>Current evidence, based on a review of the potential impacts of climate change at the regional level<sup>11</sup> and the Climate Change Action Plan 2010+ suggests that the City will need to be prepared for a range of potential impacts including increases in flooding, summer droughts and a greater probability of extreme weather events (heat waves and extreme floods for example). By 2050 climate change could be characterised as follows:</p> <ul style="list-style-type: none"> <li>• An increase in annual temperature, with most of this accounted for with warmer summers (where average summer temperatures could increase by 3oC) and further exacerbated by the urban heat island effect. The potential for temperatures to exceed 40oC in the summer is also increasingly likely.</li> <li>• An increase in rainfall and the potential for storms in the winter months. In the summer, rainfall is likely to decrease but will be of a greater intensity when it does rain.</li> <li>• An increase in other extreme events, such as the tornado experienced by the City's southern suburbs in the summer of 2007.</li> </ul>	<ul style="list-style-type: none"> <li>• Considering the location of key infrastructure and vulnerability to climate change</li> <li>• Incorporation of sustainable urban drainage at a strategic scale to reduce the impacts of surface water run-off and flooding, which could also link with green infrastructure.</li> <li>• Protecting and enhancing green infrastructure.</li> <li>• Incorporating passive design techniques and include higher levels of green space, vegetation and shading in new development.</li> </ul>
<p>SA Theme 4: Historic environment, landscape, biodiversity and geodiversity</p>	<p><b>Historic environment:</b> The key impacts here are likely to relate to the impacts of new development and infrastructure on Birmingham's historic environment, including scheduled ancient monuments, listed buildings, conservation areas, registered parks and gardens and canal network. Birmingham has 27 designated conservation areas, mainly located within attractive suburbs and within historic parts of the City Centre, and 13 ancient monuments of national importance.</p> <p><b>Landscape:</b> New development will have an impact on the City's landscapes both within the existing urban area (parks, gardens and other greenspace) and outside of urban area where greenfield development is required. Within the main urban area the impacts could relate to development pressures on landscape features including parks, gardens and water courses. Outside the City, the major opportunities for greenfield development lie to the north/north east of the town (Sutton Coldfield) and to the south/south-west (beyond Longbridge) so the impacts of greenfield development (if required) on the surrounding landscape would more likely be felt here (although further analysis of landscape capacity and sensitivity is required).</p> <p><b>Biodiversity:</b> The City accommodates a range of designated sites of nature conservation importance and will have other non-designated areas which make an important contribution to biodiversity. This will include both previously developed land and buildings and greenfield sites. New development will have a detrimental impact on ecology and biodiversity where this involves the loss of habitats or leads to activities which will adversely impact on these features.</p> <p><b>Geodiversity:</b> Concerns the variety of rocks, minerals and landforms and the processes which have informed these features over time. There could be impacts outside of the City in relation to the demand for minerals to build new homes, businesses and infrastructure (explored under SA Theme 1).</p> <p><b>Open space:</b> More than one fifth of the city consists of open space. There is a great variety of open space provision including parks, nature reserves, allotments, golf courses and playing fields. Many of these areas are linked by rivers, watercourses and canals forming an inter-connected network which extends into areas beyond Birmingham's boundary and which is of great importance in promoting biodiversity. 16% of Birmingham's land area is designated as Green Belt.</p>	<p>Protection and enhancement of cultural assets through development briefs, for example.</p> <p>Habitat protection, improvement and creation through strategies, policy and their implementation.</p> <p>Attention to the quality of the townscape through development management.</p> <p>A healthy and attractive environment is important to the health and well-being of the population and quality of life more generally, and is related to a successful economy, particularly for visitors.</p>
<p>SA Theme 5: Pollution</p>	<p><b>Air pollution:</b> The whole of Birmingham was designated an Air Quality Management Area (AQMA) in 2003 to help improve air quality in the City. The main pollutant is nitrogen dioxide (NO<sub>2</sub>), arising from both transport and</p>	<p>The detailed monitoring of pollution levels should be related to the potential impact that new development could have on</p>

<sup>11</sup> The Potential Impacts of Climate Change in the West Midlands, Entec UK Ltd for Sustainability West Midlands, January 2004

SA Theme	Key Issues	Opportunities and Interrelationships
	<p>industry.</p> <p><b>Water pollution:</b> The proportion of Birmingham’s waterways which are of a good biological or chemical quality is significantly below national and regional averages.</p> <p><b>Soil pollution:</b> Outside of the urban area to the north and north east of the city as well as to the south west are areas of Grade 3 (moderate to good quality) agricultural land which could clearly be impacted on where greenfield development is proposed.</p> <p><b>Noise pollution:</b> The key impacts here are likely to relate to the specific of particular development proposals rather than direct impacts associated with the levels of growth proposed, notwithstanding that an expanded BIA could have a potential impact in terms of increased air traffic over the city.</p>	<p>these.</p> <p>Pollution loadings have direct and indirect impacts on human health and well-being and quality of life in general.</p>
<p>SA Theme 6: Economic growth</p>	<p>Birmingham is a major employment centre drawing in workers from across the West Midlands region to the City Centre. Managers, senior officials and professionals make up about 35% of persons commuting into Birmingham, compared with 23% of the city’s working residents. However, worklessness remains a significant issue. The employment rate at 61.5% in 2008 is noticeably below the national rate of 74.2%. The female rate (54.8%) is much lower than the male rate (67.9%) and the non-white employment rate in the city is 46%; 25 points lower than the white rate.</p> <p>Birmingham lies at the heart of the West Midlands Region and there are therefore important links between Birmingham and adjoining areas. The main international gateway to Birmingham is provided by Birmingham International Airport and Birmingham International Station, which adjoin the NEC complex. This area is also a major source of employment. It lies in Solihull Borough, just to the east of Birmingham. The quality of the transport links between this area and Birmingham city centre is a key issue. There are close links between the residential areas of East Birmingham and those of North Solihull. Both are regeneration priorities and there is a need to ensure that a consistent approach is taken. Improving access to jobs is important in both these areas. There is a significant amount of in-commuting to Birmingham from adjoining areas, and in particular South East Staffordshire (Lichfield and Tamworth), Solihull, South Warwickshire (Stratford-on-Avon) and North Worcestershire (Redditch, Bromsgrove and Worcester). Providing high quality public transport links, in particular by rail between these areas and Birmingham is important.</p> <p>The main impact that the BDP will have on economic growth relates to whether or not it provides a sufficient and flexible supply of employment land and premises, attractive to developers and investors wishing to expand or establish themselves in Birmingham. There is potentially a shortfall in the supply of B1 and B8 employment land that will need to be addressed through the proposals of the BDP. Economic growth and housing growth (SA Theme 8) are inextricably linked in sustainability terms since the new housing will be required to accommodate existing and new labour supply. The City’s (TTWA) extends as far north as Tamworth and south towards Redditch<sup>12</sup>, but ensuring a suitable balance and match between employment and housing supply (affordable and of a range of types and sizes) within the City is important in terms of ‘self-containment’ and reducing people’s need to travel larger distances between home and work. Pressure for housing development has led to the depletion of the stock of employment land in the City. Consideration therefore needs to be given to the balance of housing and employment land, taking into account factors such as:</p> <ul style="list-style-type: none"> <li>• the changing employment structure of the City;</li> <li>• changing demands from business in respect of the type, amount and location of land required; and</li> <li>• the availability of a skilled workforce to meet the needs of existing and</li> </ul>	<p>Provide a range of employment sites at a variety of scales.</p> <p>Support employment development in specific sectors that will contribute to Birmingham’s economic health and/or meet the demands of the workforce e.g. for small business and apprenticeships.</p> <p>Economic growth is closely related to the health and well-being of the population, and aspirations to advance equality of opportunity.</p>

<sup>12</sup> Office for National Statistics, Travel to Work Areas



SA Theme	Key Issues	Opportunities and Interrelationships
	<p>future businesses.</p>	
SA Theme 7: Communities, healthy lifestyles and equality	<p>Birmingham is densely populated at 37.4 persons per hectare. The population is relatively young with about 45% of residents under 30 compared with the national average of 37%. Demographic trend projections from the National Statistics Office for the period 2006-2026 point to growing numbers in all age groups except 15-29. The projections show a 12% growth in the number of Birmingham's residents aged 65 or older, but this is noticeably lower than the 43% national increase. In contrast the number of children in Birmingham is expected to increase by 10%, compared with the national growth of only 2%. The City contains a significant percentage of Black and Minority Ethnic (BME) citizens and this section of the population is predicted to increase in future years. Birmingham has a relatively high percentage of households without a car: 38% compared to the English average of 27%. The percentages without a car are high in the inner parts of the city and in some peripheral areas.</p> <p>The BDP will have a range of impacts on Birmingham's existing and new communities relating to the new growth that it proposed in terms of meeting people's housing needs and opportunities for employment. It will also impact on their ability to access education, healthcare and other services, considering the capacity of existing facilities and opportunities for enhancement aligned with proposed growth.</p>	<p>Aligning growth and development to areas where investment in existing healthcare facilities is to be targeted and where new facilities are proposed. New healthcare facilities can also be funded in part from new development.</p> <p>Provision of green infrastructure including routes for walking and cycling, retaining existing playing fields, sports pitches, parks and gardens and leisure centres and providing new ones. This could also have wider benefits in terms of responding to climate change adaptation, reducing CO<sub>2</sub> emissions by allowing for walking and cycling instead of the car, ecological benefits in terms of new habitat creation and flood attenuation.</p>
SA Theme 8: Housing	<p>Birmingham contains a wide range and quality of housing. There is a relatively low proportion of detached housing and higher proportions of terraced housing and flats. Two and three bedroom dwellings predominate. In recent years the city has seen major new residential developments and substantial clearance programmes. Between 2001 and 2009 almost 26,000 new dwellings were completed, many of which were new apartments in the City Centre. Over the same period about 9,400 dwellings were demolished. The supply of land for housing within the city boundary is constrained due to the extent of built up area, and the fact that the majority of open land on the edge of the city is designated as Green Belt.</p> <p>The key impacts relate to whether or not the BDP provides enough housing, in the right locations and of the right type. There will need to be a suitable supply of both market and affordable housing to meet the needs of existing and new residents. The availability of housing also has significant linkages with economic growth, in terms of providing local housing to house the labour force. A failure to provide sufficient housing within the City to support economic growth could lead to unsustainable travel patterns with high levels of 'in-commuting' and undermining self-containment.</p>	<p>Developing a strategy of regeneration, through city centre and sustainable neighbourhoods.</p> <p>Ensuring that there is a range housing types to meet demand, including affordable housing, and mixed use developments</p> <p>Ensuring that housing is located within reasonable access of services and public transport.</p> <p>Provision of housing to meet local needs is important for the well-being of communities and the local economy.</p>





## 4. The Birmingham Development Plan

### 4.1 Vision, Objectives and Spatial Strategy

The BDP sets out the following vision for the evolution of the City by 2031:

*“By 2031 Birmingham will be renowned as an enterprising, prosperous, innovative and green city that has delivered sustainable growth meeting the needs of its population and strengthened its position on the international stage.*

*Birmingham’s residents will be experiencing a high quality of life, living within attractive and well designed sustainable neighbourhoods. The choice and affordability of housing will be meeting the needs of all and local jobs and services will be accessible by a range of sustainable transport choices.*

*The City’s economy will be strong and prosperous built around a diverse base of economic activities and supported by a skilled workforce. The City Centre will have expanded accommodating major new prime office developments and a series of exciting destinations boosting the cultural, leisure and retail offer. The network of thriving local centres will reflect the diversity of the City and the needs of local people.*

*The historic environment and sense of place of localities throughout the City will have been enhanced. The City will have achieved high sustainability credentials with resilient, adaptive environments with all new developments built to the best standards of design.”*

In setting a preferred state for the City in 2031, the Vision incorporates aspirations for sustainable development, seeking to balance of environmental, economic and social considerations as part of growth. The BDPs spatial strategy is based around four themes:

<p>Planning for high quality places</p>	<p>The City’s future growth will be pursued in the most sustainable way practicable reducing the City’s carbon footprint and creating resilient and adaptive environments.</p> <p>New development will need to be built to the highest sustainability standards, helping to generate wider benefits in terms of the quality of the environment and carbon reduction, be energy efficient, using renewable resources, and minimising the production of waste.</p> <p>All future development will need to be supported by suitable social infrastructure and set within environments that reflect the character and history of the City.</p> <p>Across the City all development must be well-designed, accessible and safe. Schools, health care facilities, shops and other services need to be available in accessible locations along with parks, sports facilities and well-maintained local public open space, forming part of a wider ‘green infrastructure network’ threading through the City and linking to the open countryside beyond.</p> <p>Historic assets in all their forms will be promoted and conserved in supporting the delivery of distinctive places. Equally the biodiversity and geodiversity will be critical components in delivering a high quality of life and contribute to the quality of the environment and future green credentials of the City. Birmingham’s wide variety of natural environments will be protected and enhanced with new opportunities for wildlife and biodiversity to flourish encouraged.</p>
<p>Planning for a growing population</p>	<p>The strategy of the BDP is to accommodate as much of the City’s housing requirement as possible within the local authorities boundary. The land that is available to the City to accommodate future development is limited. Alongside the BDP a wider growth strategy for the Greater Birmingham and Solihull Local Enterprise Partnership area and other adjoining authorities will set out how and where the remaining housing could be delivered. This will reflect the historic trends where adjoining authorities have accommodated a proportion of the City’s growth</p>

on the basis of the travel to work patterns and wider economic benefits of housing delivery.

In delivering the principles of sustainable neighbourhoods we will seek to ensure that a wide choice of housing sizes, types and tenures is provided to community needs including homes for families, for the elderly and appropriate levels of affordable housing. The contribution that 'mature suburbs' make to the quality and choice within the City's housing stock will continue to be recognised and these areas protected.

Over the period 2011 to 2031 our focus will be on delivering as much of the new housing that the City needs within the urban area as possible. Brownfield and other available sites within the existing built-up area including major developments such as Greater Icknield, the Southern Gateway and Longbridge will be the priority.

While development in the urban area will be prioritised there is a limit to the amount of available space to accommodate the City's growing population. The release of land from the Green Belt will be phased over the Plan period. Development in these locations will need to deliver the principles of sustainable neighbourhoods.

#### Planning for a prosperous economy

Six Economic Zones will be created to provide the clustering of economic activity within high quality business environments that are supported by the right infrastructure. The Economic Zones include an Advanced Manufacturing Hub at the East Aston Regional Investment Site, ITEC Park at the Longbridge Regional Investment Site, Life Sciences Campus around the QE Hospital and Birmingham University Campus, Environmental District at Tyseley, Food Hub at IMI and The City Centre Enterprise Zone (EZ). The EZ, covering 26 sites in the City Centre, will play a key role in delivering high quality office accommodation for growth in business, financial and professional services, digital media and creative industries. Beyond these Economic Zones the City's Core Employment Areas will play an important role in accommodating the requirements of a wide range of economic sectors. These Core Employment Areas provide the City's main employment opportunities and include the Regional Investment Sites and other high quality areas such as The Hub, Witton and in Washwood Heath at the former sites of Alstom and LDV.

Outside these areas other land in employment use will continue to be protected and the provision of accommodation for SME's will be supported. Marginal industrial land of poor quality that no longer meets the requirements of the market or businesses may be promoted for redevelopment to alternative uses.

A thriving network of centres will be a significant driver for growth and central to delivering new office and retail development and other services to support communities throughout the City. The priority will be to promote retail and office development within the defined centres and resist development that would undermine the strength of the network.

The City Centre will continue to be strengthened as a centre for financial and business services, and as a destination for shopping, business tourism and major cultural events with world class conference facilities and venues. Five areas of transformation will deliver the growth to strength the role of the City Centre, investing in new high quality buildings and public spaces and creating new vibrant destinations. This growth will be coupled with a focus on promoting the distinctive character of the Quarters.

Sutton Coldfield Town Centre as a sub-regional centre is capable of accommodating significant additional comparison retail floorspace and some office space.

Perry Barr, Selly Oak and Meadway as district growth centres accommodating both retail and office uses at lower levels to the City Centre and sub-regional centres.

A network of some 70 other district and neighbourhood centres accommodating more limited levels of growth supporting local needs

#### Planning for improved connectivity and delivery of infrastructure

Major planned improvements to the City's national and international accessibility will be brought about by the continued expansion of Birmingham Airport. The expected development of the High Speed rail link will provide further opportunities to build on this success and enhance the City's connectivity.

New and improved routes for pedestrians and cycle priority will be promoted connecting the network of centres, residential areas, employment opportunities and open countryside.

These investments will help to reduce car dependency and encourage use of public transport and non-motorised forms of transport such as cycling and walking. In support of these activities which generate a high number of trips will be encouraged to locations which have high levels of accessibility or where the infrastructure can be provided to enable sustainable modes to be promoted.

State of the art digital networks will be made available throughout the City. This is an essential step in ensuring that Birmingham can fulfil its potential as a centre of innovation drawing on the strong academic and research base established in the City's universities.

## 4.2 Evolution of the Birmingham Development Plan and its Sustainability Appraisal

The BDP has evolved through a number of distinct phases, originating in 2008 with the identification of issues and options for the period to 2026. Accompanied by the SA Scoping Report<sup>13</sup> and an Interim Sustainability Appraisal<sup>14</sup>, the Issues and Options document presented three options for the growth of the City as follows:

	Option 1	Option 2	Option 3
Number of additional dwellings 2006-2026	50,600 2,500 dwellings per annum (dpa)	55,000-60,000 2,750-3,000 dpa	Up to 65,000 3,250 dpa
<b>SPATIAL STRATEGY</b>			
Housing	<b><u>50,000 within the core of the city</u></b> City centre focus with high density developments. Steps taken to ensure more family housing. A sustainable urban neighbourhood at Longbridge. No changes to Green Belt required.	<b><u>As per Option 1 plus 5,000-10,000 more within city</u></b> Development in the city centre but also in three key centres: Perry Barr, Selly Oak and the Meadway. Significant housing redevelopment/renewal of east and south western parts of the city supported by around four further sustainable neighbourhoods (in addition to Longbridge) including: No changes to Green Belt anticipated.	<b><u>As per Options 1 and 2 plus further 5,000-10,000 on urban extensions</u></b> In addition to strategy under Option 2, urban extensions will also be necessary, requiring selective reviews of the Green Belt: - north/north east of the City (into Lichfield District); and/or - south of the City (into Bromsgrove District).
Focus for regeneration	Three estates in Kings Norton as well as at Newtown and Aston. Western Growth Corridor would remain a key regeneration programme.	Same as under Option 1, but Eastern Corridor also identified.	Same as under Option 2, but Green Belt development phased to ensure brownfield focus.

A Preferred Options Document was produced in 2010 which proposed a level of growth of around 57,000 dwellings to be accommodated within the existing urban area through a regeneration-based strategy. The Interim Sustainability Appraisal<sup>15</sup> accompanying the Preferred Options Document again tested the various growth options, including sub-options of Option 2:

- **Option 1:** baseline - current growth of 50,600 (2,500 dwellings per annum [dpa]).
- **Option 2a:** baseline + 10% (up to 55,000 (2,750 dpa)).
- **Option 2b:** baseline +20% (up to 60,000 [3,000 dpa]).
- **Option 3:** baseline +30% (up to 65,000 [3,250 dpa]).

<sup>13</sup> Entec/AMEC (2008, 2010, 2012) **Sustainability Appraisal of the Birmingham Development Plan Scoping Report**

<sup>14</sup> Entec (2009) **Birmingham City Council - Interim Sustainability Appraisal of the Core Strategy Issues and Options**

<sup>15</sup> Entec (2010) **Sustainability Appraisal of the Birmingham Plan - Interim Sustainability Appraisal of the Core Strategy Preferred Options**

The Interim Sustainability Appraisal recommended that no one option performed better than the others, although on balance, Option 2b was marginally preferred. The proposed scale of growth in the Birmingham Plan at 57,500, with no Green Belt release, closely reflected Option 2b. The main sustainability issue identified for Option 2b was the level of development in the existing urban area and the likely pressures on features within the natural and historic environment and make it harder to incorporate strategic-scale measures for climate change adaptation.

The need to revisit the level of housing requirement in light of the projected growth of the City's population, the Options Consultation of Autumn 2012 made the case for the need for the allocation of additional greenfield land and set out where development might potentially be located through a sustainable urban extension (SUE). This is effectively Option 3 of the issues and options document, accompanied by slightly revised objectives and a revised suite of policies which reflect a more strategic and positive approach to the growth of the City. An Interim Sustainability Appraisal<sup>16</sup> assessed various options relating to the proposed approach, namely:

- Option 1: Do nothing i.e. not seeking to accommodate the additional projected growth (i.e. the level of growth proposed in the Preferred Option [2010]).
- Option 2: Accommodate additional projected growth within the existing urban area.
- Option 3: Strategic Green Belt Release (plus sub-options relating to individual sites):
  - Area A: Hill Wood, East of Watford Gap (two sub-options).
  - Area B: West of the M6 Toll (two sub-options).
  - Area C: West of the Sutton Coldfield Bypass, Walmley (two sub-options).
  - Area D: East of the Sutton Coldfield Bypass, Walmley.

In testing the option of a SUE against alternatives of not providing for the additional growth or further concentration of development in the urban area, the latter, it was concluded, involving unacceptably high densities of development and the likely loss of open spaces and employment land. A well-planned SUE in the right location, by contrast, could provide a sustainable solution through providing a scale of development that could support additional services and potentially be relatively self-contained.

An Interim Sustainability Appraisal (September 2013) tested the performance of the proposed site allocations which will help to deliver the BDP. These comprise:

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<sup>16</sup> AMEC (2012) **Sustainability Appraisal of the Birmingham Development Plan - Interim Sustainability Appraisal of the Options Consultation Document**

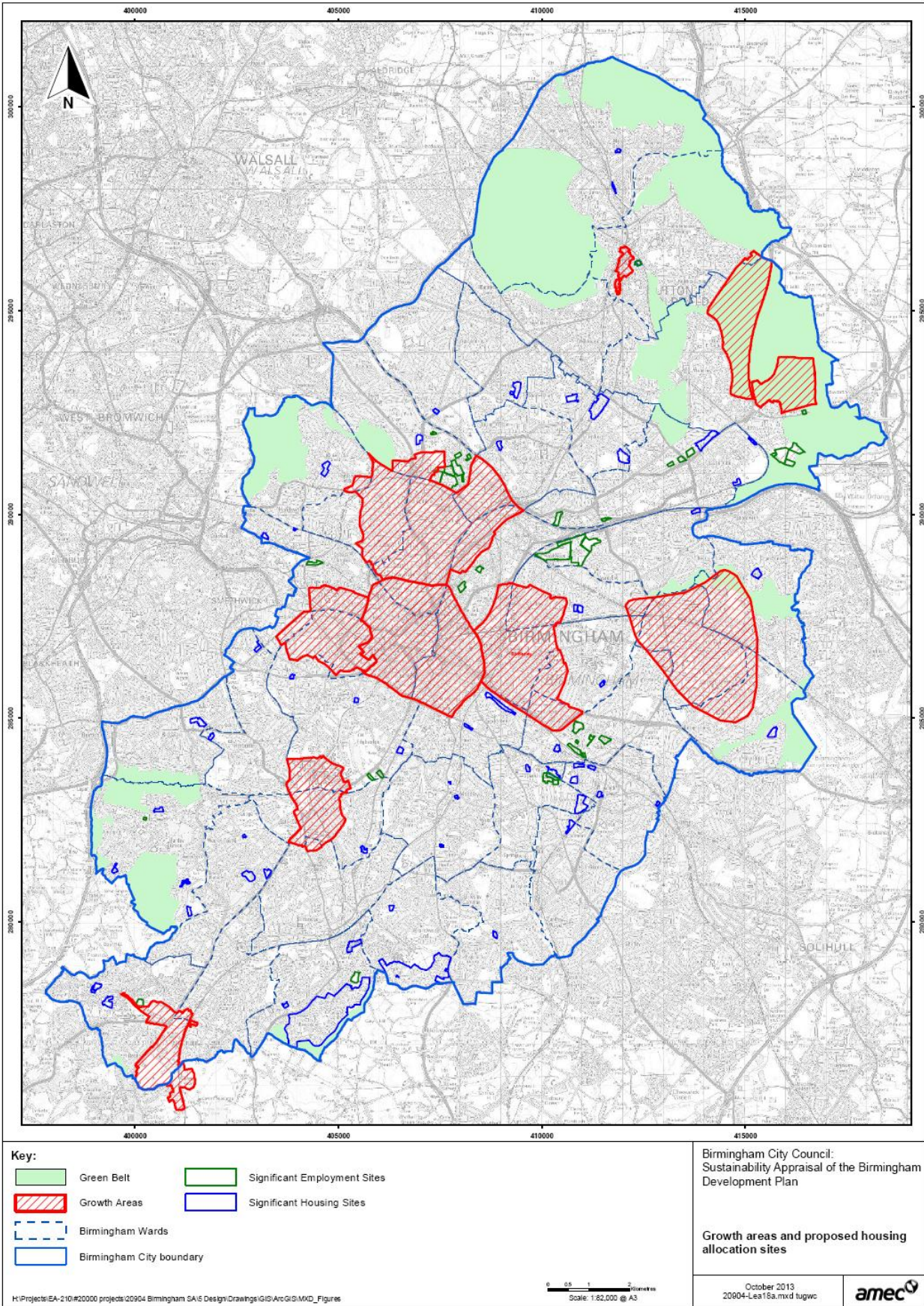
Area	Housing (dwellings)	Office (m <sup>2</sup> )	Retail (m <sup>2</sup> )	Employment Sites (ha)
<b>Growth Areas</b>				
City Centre	13,740	749,800	254,500	3
Greater Icknield	2,890	0	2,500	0
Aston, Newtown & Lozells AAP	1,520	10,000	25,000	26
Sutton Coldfield	310	20,000	37,500	0
Sustainable Urban Extension	5,750	0	0	0
Peddimore	0	0	0	80
Bordesley Park AAP	640	0	0	30
Cole Valley Triangle	1,170	tbc	tbc	10
Selly Oak and South Edgbaston	930	tbc	tbc	5
Longbridge AAP	2,020	10,000	13,500	25
Growth Areas and Green Belt Total	28,970	791,300	334,500	179
<b>Rest of City</b>	13,320	14,000	41,600	121

The Green Belt/greenfield sites were also subject to a separate appraisal by Birmingham City Council<sup>17</sup> of their performance as suitable housing sites and this was used to help inform the appraisal of these sites.

<sup>17</sup> Birmingham City Council (September 2013) **Green Belt Options Assessment**



Figure 4.1 Proposed Growth Areas and Strategic Housing and Employment Allocations





The Interim Sustainability Appraisal of the proposed sites (September 2013) concluded that the sustainability performance of the proposed sites to deliver the scale of growth required over the plan period was overall a strong one, despite there being some significant adverse effects related to the loss of greenfield land associated with the proposed Green Belt release sites. This was to some degree balanced by the opportunities to create a new community which has a degree of self-sufficiency through new service provision and access to proposed employment opportunities, but equally could be connected to the existing urban area.

The proposed growth areas and strategic sites all demonstrate a relatively strong sustainability performance, being located in relative proximity to existing transport and service infrastructure whilst providing opportunities for incorporating measures which will help to mitigate impacts, such as best practice design delivering energy efficient development, green infrastructure and on the larger sites renewable energy generation and distribution. Concentration of the majority of growth on sustainable neighbourhoods will help to maintain and reinforce community vitality, and absorb pressures for the outward growth of the City. Concentrating development in existing centres provides wider sustainability benefits through limiting the need to travel (particularly cross-town trips), providing alternative travel options based around public transport, walking and cycling, and in so doing reducing air pollution. Potential problems associated with ‘town-cramming’, such as loss of open spaces and the character of localities can be mitigated through the development and application of policies on design.

There may be some site-specific environmental effects associated with the housing allocations, both positive and negative, depending on their location and characteristics, but BDP implementation policies seek to manage impacts and improve environmental performance (such as through energy efficiency and good design) which together will help to realise positive environmental effects. Social impacts are likely to be similarly positive, through the support of existing services and the provision of new ones where appropriate, and wider opportunities for the enhancement of green infrastructure and encouragement of more active modes of travel, for example. The maintenance and enhancement of economic vibrancy across the City is critical, and the allocations seek to provide such opportunities, supporting housing growth and reducing out-commuting.

Overall, the proposed sites contribute to meeting the sustainability aspirations of the BDP and whilst there are predicted negative effects which accompany growth which will require monitoring and perhaps mitigation, particularly at site level, there should be positive effects.

## Observations on Issues Arising and Recommendations

Notwithstanding the overall sustainability performance of the proposed sites, there are a number of issues which should be considered as part of site development as a whole to help ensure that sustainability objectives are worked towards. Some of these issues are addressed through good planning practice (notably the implementation of good design which has inherent sustainability qualities), but others require the consideration of how through integrated action, sustainability outcomes can be more far-reaching. In light of this, the following recommendations are made:

- The need to avoid piecemeal development which could miss the opportunities associated with improving the sustainability of localities in general through the use of sustainable transport networks, for example. This entails all major development being strategy and masterplan-led, with clear references to their wider context and to the opportunities for synergies between adjacent areas.



- Close attention to design issues of areas and buildings will be critical in ensuring that high standards are achieved in practice, particularly in respect of ensuring the energy efficiency of new buildings, using opportunities to incorporate district heating networks, cycle and footpaths, and the incorporation of green infrastructure which serves multiple purposes.
- The use of City-wide initiatives to reinforce sustainability policies and practice e.g. through topic-specific SPGs and strategies such as for green infrastructure and nature conservation, will be critical in developing a rounded approach to sustainable neighbourhoods in particular but also the progression of the City on a more sustainable path. Work should progress on the development of detailed approaches to the enhancement of green infrastructure/biodiversity (advancing the Green Living Spaces Strategy), recreation, sustainable transport and access, local economic development and renewable energy.
- Clear links between housing and service provision and job creation as part of the concept of 'sustainable neighbourhoods' need to be established. Further work is required on establishing the form and function of such areas, in particular what changes to their current structure are needed to help create the conditions for more sustainable living and their integration with adjacent areas.

## 5. Sustainability Appraisal of the Birmingham Development Plan

### 5.1 Compatibility of the BDP Objectives and the SA Objectives

The ODPM SA Guidance (2005) recommends that the compatibility of the Plan Objectives against the SA Objectives is assessed. A compatibility analysis was undertaken within the Scoping Report, but the BDP Objectives have evolved slightly from previous versions of the BDP and this analysis reflects those proposed for the Submission Plan. The BDP Objectives are:

1. To develop Birmingham as a City of sustainable neighbourhoods that are safe, diverse and inclusive with locally distinctive character.
2. To make provision for a significant increase in the City's population.
3. To create a prosperous, successful and enterprising economy with benefits felt by all.
4. To promote Birmingham's national and international role.
5. To provide high quality connections throughout the City and with other places including encouraging the increased use of public transport, walking and cycling.
6. To create a more sustainable city that minimises its carbon footprint and waste while allowing the City to grow.
7. To strengthen Birmingham as a learning City with quality institutions.
8. To encourage better health and well-being through the provision of new and existing recreation and leisure facilities linked to good quality public open space.
9. To protect and enhance the City's heritage and historic environments.
10. To conserve Birmingham's natural environments, allowing biodiversity and wildlife to flourish.
11. To ensure that the City has the infrastructure in place to support its future growth and prosperity.

Table 5.1 sets out a compatibility matrix of the Plan Objectives against the SA Objectives.



Table 5.1 Compatibility between BDP Objectives and Sustainability Objectives

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions							3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution				6. Economic growth		7. Communities, healthy lifestyles and equality					8. Housing			
	1. Resource Use	7. Waste Minimisation	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
<b>Sustainability Objectives</b>																												
<b>BDP Objectives</b>																												
1. A City of sustainable neighbourhoods	✓	N	✓	✓	✓	✓	?	?	✓	✓	✓	✓	✓	✓	✓	✓	?	N	✓	N	✓	✓	✓	✓	✓	?	?	
2. Providing for a population increase	?	?	✓	✓	?	✓	✓	✓	?	?	?	?	?	?	✓	?	✓	✓	?	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. A prosperous, enterprising economy	X	✓	X	✓	✓	✓	✓	✓	X	X	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. A national and international role	X	?	?	?	?	?	X	X	X	✓	✓	?	?	?	?	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. A connected City	✓	✓	✓	✓	?	?	✓	✓	?	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. A sustainable City	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
7. A learning City	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8. Health and well-being	N	✓	✓	✓	N	N	✓	✓	✓	✓	N	✓	N	N	N	N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9. Protection of heritage assets	✓	?	?	✓	?	?	?	?	?	✓	✓	✓	✓	✓	✓	✓	✓	N	✓	✓	✓	✓	N	N	N	✓	N	



Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions							3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth		7. Communities, healthy lifestyles and equality							8. Housing				
	Sustainability Objectives		1. Resource Use	7. Waste Minimisation	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
	BDP Objectives																													
	10. Protection of natural environments	✓	?	?	✓	?	?	?	?	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	N	✓	✓	✓	✓	N	N	N	✓	N	
	11. Infrastructure for growth	?	?	N	✓	N	?	✓	✓	✗	?	?	?	?	✓	✓	✓	?	✓	N	?	N	N	✓	✓	?	N	✓	N	

**Key:** ✓ Compatible ✗ Potentially Incompatible N Neutral relationship ? Uncertain relationship

Table 5.2 provides comments on the scoring presented in Table 5.1, concentrating on potential incompatibilities which should be noted (although not necessarily resolved) and taken into account in considering any mitigation measures or alternative approaches. In some cases, potential impacts such as that of economic growth on biodiversity or climate change will be addressed through policy measures in the BDP aimed at protecting and enhancing the environment, for example. In other cases, such as providing for an increase in the City's population, the way in which such an objective is implemented will be critical, where provision can be made for housing development in combination with environmental enhancement.

**Table 5.2 Analysis of the compatibility between BDP Objectives and Sustainability Appraisal Objectives**

BDP Objective	Comments
To develop Birmingham as a City of sustainable neighbourhoods that are safe, diverse and inclusive with locally distinctive character.	In principle, there is a high degree of compatibility between this Objective and the majority of SA Objectives, particularly in the context of the regeneration-led strategy of the BDP which inherently seeks to pursue development which complements and improves the existing character of the City. Nevertheless, there are uncertainties associated with issues such as sustainable travel which will need to be addressed.
To make provision for a significant increase in the City's population	The intended scale of growth over the Plan period is unprecedented, and as such will inevitably compromise the delivery of other objectives to a lesser or greater degree. A range of uncertain relationships therefore exist which will require attention through policy implementation and long-term monitoring, notably in relation to potential impacts on biodiversity, air quality, water quality and the built and historic environment, all of which could come under increasing pressure as a result of significant population increases. This is balanced by the significant opportunities to invest in sustainable travel and renewable energy, for example. As with other policy areas, the implementation of policy to mitigate local and City-wide impacts will be critical to address these uncertainties.
To create a prosperous, successful and enterprising economy with benefits felt by all	Investment in economic development is potentially accompanied by a range of compromises in respect of environmental quality (either through direct land-take or the effects of increased transport activity), although in many cases these impacts could be mitigated through appropriate implementation. The BDP's approach of concentrating employment development in strategic locations should in itself help to contain impacts. The role of Birmingham the key economic driver in the West Midlands and further afield is critical, with the need to balance potentially adverse impacts with the benefits which wealth creation brings.
To promote Birmingham's national and international role	The interactions associated with this Objective are arguably amongst the most uncertain and potentially difficult. The ambition for Birmingham to have a higher national and international profile will inevitably create pressures in respect of transport growth, for example, and hence CO <sub>2</sub> emissions, as well as demands on land for infrastructure development. The consideration of cross-boundary impacts is critical, with the location of Birmingham Airport in Solihull close functional interdependencies between the two plan areas. Aside from the range of uncertainties associated with the impacts on natural resources, which characterise the relationship between this Objective and the SA Objectives, potentially positive relationships exist in the promotion of economic and social development.
To provide high quality connections throughout the City and with other places including encouraging the increased use of public transport, walking and cycling	The provision of quality transportation links is essential to create a sustainable city and assists in contributing to a number of wider goals such as minimising the impact of climate change. Consequently, there are a wide range of positive relationships which can be realised if properly implemented, in particular the opportunity to capitalise on the concentration of activity in sustainable neighbourhoods.
To create a more sustainable city that minimises its carbon footprint and waste while allowing the City to grow	Attention on creating more sustainable city should yield positive relationships across a wide range SA Objectives, if fully implemented. However, the extent to which economic development aspirations might be fulfilled and compromises required in respect of housing delivery could be needed. As yet, proof of how to secure a balance between these aspirations is not available.

BDP Objective	Comments
To strengthen Birmingham as a learning City with quality institutions	The objective to increase the opportunities for the local residents of Birmingham to learn and develop is likely to generally accord with SA Objectives, particularly in respect of promoting economic development and greater social equity through giving individuals and communities greater choice over their futures.
To encourage better health and well-being through the provision of new and existing recreation and leisure facilities linked to good quality public open space	The aspiration to raise the level of the population's health and well-being contributes to a wide range SA Objectives, particularly those seeking to improve the quality of people's lives. Carefully implemented, the natural connections between these Objectives can be reinforced.
To protect and enhance the City's heritage and historic environments	The protection of the City's heritage is likely to accord with a number of the SA Objectives. It is noted however that several relationships are uncertain as to whether conservation could restrict development from being located in a more sustainable location for example.
To conserve Birmingham's natural environments, allowing biodiversity and wildlife to flourish	As with the cultural heritage, the protection of the City's environmental assets is considered to accord with a number of the SA Objectives, with no obvious incompatibilities. However, several relationships are uncertain, for example whether conservation priorities could restrict development from being located in a more sustainable location for example.
To ensure that the City has the infrastructure in place to support its future growth and prosperity.	As with economic development and the promotion of Birmingham's national and international role, there a range of uncertainties over the compatibility between investment in infrastructure and realising aspirations for limiting climate change for example. Inevitably, much will depend on implementation at the local level (which in turn can be mitigated), but the overall and long term impact of such development will have to be monitored.

## 5.2 The BDP Strategy: Sustainability Analysis

The spatial strategy proposed by the BDP centres on regeneration-led growth, supported by limited strategic allocations on Greenfield land which, along with development spread across adjacent authorities, help to meet the overall housing need for the City. Table 5.3 sets out an appraisal of the performance of the strategic approach of the BDP against the SA Objectives which, for this exercise, have been grouped by theme.

**Table 5.3 Appraisal of Key Elements of the BDP Strategic Approach**

SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
1. Natural resources and waste	<p><b>1. Resource Use:</b> Use natural resources such as water and minerals efficiently.</p> <p><b>7. Waste Reduction and Minimisation:</b> Encourage and enable waste minimisation, reuse, recycling and recovery.</p> <p><b>8. Efficient use of land:</b> Encourage land use and development that optimises the use of previously developed land and buildings.</p>	<p>The Scale of Growth</p> <p>Climate Change</p> <p>Green Belt and Green Infrastructure</p>	<p>The intended scale of growth over the next 20 years, if properly managed, should contribute to greater efficiency in the use of land through the regeneration of brownfield sites, for example. The relatively compact nature of the City provides a useful template for future development.</p>	<p>In order to avoid inefficient use of scarce land resources, there will have to be particular attention paid to the co-ordination of site development. This will need to include dialogue with adjacent authorities over, for example, the functioning of Birmingham International Airport as part of the City's growth aspirations, and the channelling of regeneration efforts into the Black Country.</p> <p>The need to use greenfield land to meet the City's housing requirement is a significant, but probably unavoidable negative effect, although one which can be mitigated through design of a SUE and integration with existing communities.</p>
2. CO <sub>2</sub> emissions	<p><b>2. Sustainable design, construction and maintenance:</b> Promote and ensure high standards of sustainable resource-efficient design, construction and maintenance of buildings, where possible exceeding the requirements of the Building Regulations.</p> <p><b>3. Renewable Energy:</b> Encourage development of alternative and renewable resources.</p> <p><b>4. Energy Efficiency:</b> Reduce overall energy use through energy efficiency.</p> <p><b>5. Sustainable Transport:</b> 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.</p> <p><b>6. Reduce the need to travel:</b> Ensure development reduces the need to travel.</p>	<p>The Scale of Growth</p> <p>Climate Change</p> <p>The City Centre</p> <p>Modernising Infrastructure</p> <p>Quality of Life</p>	<p>There is the opportunity to pioneer the introduction of technologies which help to reduce per capita emissions as part of new development.</p>	<p>Overall CO<sub>2</sub> emissions could well increase associated with population and economic growth. This will require monitoring and co-ordination with complementary City-wide strategies such as the Climate Change Strategy. There is the potential for contradiction between the aspirations for Birmingham to be a world city, and the impacts of the increased travel that this is likely to generate.</p>



SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
	<b>9. Reduce climate change:</b> Minimise Birmingham's contribution to the causes of climate change by reducing emissions of greenhouse gases from transport, domestic, commercial and industrial sources.			
3. Climate change adaptation	<b>10. Manage Climate Change:</b> Implement a managed response to the unavoidable impacts of climate change, ensuring that the design and planning process takes into account predicted changes in Birmingham's climate including flood risk.	Climate Change Green Belt and Green Infrastructure	There are significant opportunities for the Birmingham Plan to contribute climate change adaptation across the City through the siting of development and its design.	Care will have to taken to ensure that the capacity of the City to adapt to climate change impacts is not compromised by growth plans.
4. Historic environment, landscape, biodiversity and geodiversity	<b>12. Built and Historic Environment:</b> Value, protect, enhance and restore Birmingham's built and historic environment and landscape. <b>13. Natural Landscape:</b> Value, protect, enhance and restore Birmingham's natural landscape. <b>14. Biodiversity:</b> Value, protect, maintain, restore and re-create local biodiversity and geodiversity.	The City Centre Mature Suburbs Quality of Life	Growth brings the opportunity to enhance the quality of natural and cultural assets through attention to the siting and quality of development. Commitments to the protection of natural and cultural assets and the provision of green infrastructure should provide a sound basis for moving forward.	Growth in Birmingham of the scale proposed could well place pressures on the City's natural resources, given their relatively limited extent. Particular attention will therefore need to be paid to ensuring that any compromises in how natural resources are used yield a net gain.
5. Pollution	<b>15. Air Quality:</b> Minimise air pollution levels and create good quality air. <b>16. Water Quality:</b> Minimise water pollution levels and create good quality water. <b>17. Soil Quality:</b> Minimise soil pollution levels and create good quality soil. <b>18. Noise:</b> Minimise noise pollution levels.	The Scale of Growth Climate Change	Overall pollution levels have been declining and this has the potential to continue as a result of the use of high standards of new development, modal shift in transport towards more walking and cycling and public transport provision to reduce dependence on the private car.	Growth in the population and activity of the City could contribute to increased pollution levels, notwithstanding increases in walking and cycling and efficiencies in transport provision.
6. Economic growth	<b>20. Economy and Equality:</b> Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants. <b>21. Learning and Skills:</b> Promote investment in future prosperity, including ongoing investment and engagement in learning and skills development.	The Scale of Growth The Network of Local Centres Corridors The High-Tech Belt and RIS Core Employment	Economic growth provides the opportunity to ensure that the City benefits in a wide range of respects, including distribution amongst all sectors of society and the renewal of infrastructure.  The spatial division of these benefits will need particular scrutiny to ensure that the most is	Careful attention will have to be paid to ensuring that all sectors of Birmingham's population benefit from greater economic activity.

SA Theme	SA Objectives	Key Strategic Element(s)	Potential Positive Effects	Potential Negative Effects
		Areas Modernising Infrastructure Quality of Life	being made of existing and potential assets. For example, monitoring of the effect of concentrating activity in corridors will be required.	
7. Communities, healthy lifestyles and equality	<p><b>11. Sense of Place:</b> Encourage land use and development that creates and sustains well-designed, high quality built environments that incorporate green space, encourage biodiversity, and promote local distinctiveness and sense of place.</p> <p><b>19. Social and Environmental Responsibility:</b> Encourage corporate social and environmental responsibility, with local organisations and agencies leading by example.</p> <p><b>22. Community Involvement:</b> Enable communities to influence the decisions that affect their neighbourhoods and quality of life.</p> <p><b>23. Equality:</b> Ensure easy and equitable access to services, facilities and opportunities, including jobs and learning.</p> <p><b>24. Poverty:</b> Address poverty and disadvantage, taking into account the particular difficulties of those facing multiple disadvantage.</p> <p><b>25. Health:</b> Improve health and reduce health inequalities by encouraging and enabling healthy active lifestyles and protecting health.</p> <p><b>26. Crime:</b> Reduce crime, fear of crime and antisocial behaviour.</p> <p><b>28. Culture/Sport/Recreation:</b> Improve opportunities to participate in diverse cultural, sporting and recreational activities.</p>	The Scale of Growth Green Belt and Green Infrastructure Sustainable Neighbourhoods Mature Suburbs Quality of Life	The aspirations to create a world city based on significant housing and economic growth should create opportunities to create a more liveable city, whilst not compromising the quality of what already exists. The creation of Sustainable Neighbourhoods should make a significant contribution towards achieving greater self-sufficiency, in turn contributing towards securing environmental targets. The initiative holds the potential to be the focus for a range of City-wide strategies which together will work towards sustainability aspirations.	The impacts of development will have to be scrutinised against a range of indicators over the medium to long term, recognising that there could be unfulfilled aspirations and a range of unintended consequences such as greater inequality amongst some groups or areas of the City.
8. Housing	<b>27. Housing:</b> Provide decent and affordable housing for all, of the right quantity, type, tenure and affordability to meet local needs.	The Scale of Growth City Centre Quality of Life	The housing growth aspired to should create opportunities to provide for a greater choice of, and access to, housing across the City.	The location and type of new housing will have monitored to ensure that the housing delivered meets needs and does not compromise other objectives such as the maintenance and improvement of quality of life.

### 5.3 The BDP Policies: Sustainability Analysis

Since the Preferred Options Report (November 2010), the Plan policies have been refined and reflect the more focused approach of the BDP. The sustainability performance of the suite of policies proposed for the BDP is set out in Appendix A, whilst Table 5.4 summarises the results of the assessment. The appraisal used the following assessment criteria:

<b>++</b>	Major Positive Impact	<b>+</b>	Positive Impact	<b>0</b>	Neutral Impact	<b>-</b>	Negative Impact	<b>--</b>	Major Negative Impact	<b>#</b>	No Relationship	<b>?</b>	Uncertain Relationship
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The effects were also forecast in terms of: permanence (permanent or temporary); scale (within the Plan area or transboundary); and timescale (short term [1-5 years], medium term [5-10 years] or longer term [10+years]). In addition, cumulative, synergistic and cross-boundary effects were identified where relevant.

**Table 5.4 Summary of the sustainability performance of the proposed policies of the BDP**

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions					3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing								
	7. Waste Minimisation	1. Resource Use	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Sustainability Objectives	BDP Policy																												
<b>PLANNING FOR GROWTH</b>																													
PG1: Overall Levels of Growth	-	-	+	+	+	+	+	+	0	+	+	+	0	?	#	0	+	+	+	+	+	+	+	+	+	0	++	++	?
PG2: Birmingham as an International City	-	-	0	+	+	+	?	-	-	+	+	0	0?	#	#	-?	+	+	+	#	#	+	+	+	#	#	+	#	#
PG3: Place Making	+	+	++	++	+	+	++	++	+	+	++	+	+	#	#	0	+	+	++	+	+	+	+	+	+	+	++	++	++
<b>SPATIAL DELIVERY OF GROWTH</b>																													
GA1: The City Centre	+	+	++	++	++	++	++	++	+	+	++	+	#	-	#	#	-	++	++	++	+	+	+	+	+	?	?	++	+

Sustainability Theme	1. Natural resources and waste								2. CO <sub>2</sub> emissions								3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution				6. Economic growth		7. Communities, healthy lifestyles and equality								8. Housing	
	Sustainability Objectives								Sustainability Objectives								Sustainability Objectives	Sustainability Objectives				Sustainability Objectives				Sustainability Objectives		Sustainability Objectives								Sustainability Objectives	
BDP Policy	1. Resource Use	7. Waste Minimisation	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing									
GA2: Greater Icknield	+	+	++	++	++	++	++	++	+	+	++	+	+	?	#	0	++	++	++	+	+	+	+	+	+	+	++	++									
GA3: Aston, Newtown and Lozells	+	+	++	++	++	++	++	++	+	+	++	+	+	?	#	0	++	++	++	+	+	+	+	+	+	+	++	++									
GA4: Sutton Coldfield Town Centre	+	+	++	++	+	+	+	++	+	?	??	+	+	?	#	#	0	+	+	??	+	+	+	+	?	?	+	++									
GA5: Sustainable Urban Extension	-	0?	-	+++?	++	++	??	??	0	+	+	+	+	0	?	#	0	+	?	+	+	+	+	+	+	#	+	++									
GA6: Peddimore	-	0?	-	+++?	??	??	0?	-?	0	0	0?	0?	0?	0?	#	#	-?	++	++	0?	#	#	++	++	+	#	#	#									
GA7: Bordesley Park	+	+	++	++	++	++	++	++	+	+	++	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++										
GA8: Cole Valley Triangle	+	+	++	++	++	++	++	++	+	+	++	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++										
GA9: Selly Oak and South	+	+	++	++	+	+	++	++	+	+	+	+	+	??	#	#	0	+	+	+	+	+	+	+	+	?	++	++									

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions					3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality								8. Housing					
	Sustainability Objectives		8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
BDP Policy	1. Resource Use	7. Waste Minimisation																											
Edgbaston																													
GA10: Longbridge	+	+	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	+	++	++	
<b>ENVIRONMENT AND SUSTAINABILITY</b>																													
TP1: Reducing the City's Carbon Footprint	++	++	++	++	++	++	++	++	++	++	++	++	++	#	#	#	++	++	++	++	++	++	++	++	++	++	++	++	++
TP2: Adapting to Climate Change	++	#	#	++	++	++	#	#	++	++	?	?	?	#	#	#	#	+	+	?	+	+	?	?	?	#	#	?	
TP3: Sustainable Construction	++	++	++	++	++	++	#	#	++	++	++	#	#	#	#	#	++	++	++	+	+	+	#	#	#	#	++	++	
TP4: Low and Zero Carbon Energy Generation	++	++	#	++	++	++	++	+	++	++	++	#	#	++	#	#	#	++	++	+	+	+	+	#	#	#	++	++	

Sustainability Theme	2. CO <sub>2</sub> emissions							3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution				6. Economic growth	7. Communities, healthy lifestyles and equality							8. Housing				
	Sustainability Objectives								BDP Policy				Sustainability Objectives					Sustainability Objectives											
	1. Natural resources and waste	8. Efficient use of land	7. Waste Minimisation	1. Resource Use	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
TP5: Low Carbon Economy	++	++	#	++	++	++	++	+	++	++	++	+	#	#	++	#	#	#	++	++	+	+	+	+	#	#	#	#	+
TP6: Managing Flood Risk	#	#	#	#	#	#	#	#	#	++	++	+	+	+	#	+	#	#	+	#	#	#	#	+	#	#	#	#	++
TP7: Green Infrastructure Network	#	#	#	#	#	#	+	+	+	++	++	+	++	++	+	#	#	+	+	+	++	+	+	#	++	+	++	++	+
TP8: Biodiversity and Geodiversity	#	#	#	#	#	#	#	#	#	+	+	+	++	++	+	#	#	#	+	+	++	+	+	+	#	++	#	++	+
TP9: Open Space, Playing Fields and Allotments	#	#	#	#	#	#	+	+	+	+	+	+	+	+	#	#	#	#	+	+	++	+	+	+	#	++	+	++	++
TP10: Green Belt	#	#	++	#	#	#	#	+	#	#	#	++	++	++	++	+	+	#	0	#	+	+	#	#	#	++	#	++	0
TP11: Sports Facilities	#	#	#	#	#	#	+	+	+	#	#	#	#	#	#	#	#	#	+	+	+	+	+	+	#	++	+	++	+
TP12: Historic Environment	#	#	#	#	+	#	#	#	#	#	#	++	+	#	#	#	#	#	+	#	++	+	+	#	#	#	#	++	0



Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions					3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality								8. Housing							
	Sustainability Objectives	BDP Policy	1. Resource Use	7. Waste Minimisation	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
TP13: Sustainable Waste Management	++	++	+	+	#	++	+	+	+	+	#	#	#	#	+#	#	#	#	+	#	#	#	#	#	#	#	#	#	#	#	#
TP14: New and Existing Waste Facilities	++	++	+	+	#	++	+	+	+	+	#	#	#	#	+#	#	#	#	-?	+	#	#	#	#	#	#	#	#	#	#	#
TP15: Location of Waste Management Facilities	+	++	+	+	#	++	+	+	+	+	#	#	#	#	+#	#	#	#	-?	+	#	#	#	#	#	#	#	#	#	#	#
<b>ECONOMY AND NETWORK OF CENTRES</b>																															
TP16: Portfolio of Employment Land and Premises	+	+	+	++	++	++	+	+	+	+	?	0	?	?	0	?	#	#	-?	++	++	#	#	#	+	+	?	#	#	#	#
TP17: Regional Investment Sites	+	+	+#	+	+	+#	+	+#	+#	?	#	?	?	?	?	#	#	?	++	++	?	#	#	+#	+#	#	#	#	#	#	#

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions					3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing									
	Sustainability Objectives		8. Efficient use of land	7. Waste Minimisation	1. Resource Use	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
BDP Policy																														
TP18: Core Employment Areas		+	+	+	+	+	+	+	?	?	#	?	?	?	#	#	#	?	++	++	?	#	#	+	+	#	#	#	#	#
TP19: Protection of Employment Land		+	+	+	+	+	+	+	?	?	#	+	#	#	#	#	#	#	++	++	?	#	#	+	+	#	#	#	#	#
TP20: Network and Hierarchy of Centres		#	#	+	+	#	#	+	++	+	#	+	#	#	#	#	#	#	++	+	++	#	#	+	+	#	#	+	+	+
TP21: Convenience Retail Provision		#	#	+	#	#	#	++	++	+	#	++	#	#	#	#	#	#	++	+	++	+	+	+	+	+	+	?	+	++
TP22: Small Shops and Independent Retailing		#	#	+	#	#	#	++	++	+	#	++	#	#	#	#	#	#	++	+	++	+	+	+	+	+	+	?	+	++
TP23: Promotion of Diversity of Uses within Centres		#	#	+	#	#	#	++	++	+	#	++	#	#	#	#	#	#	++	+	++	+	+	+	+	+	+	?	+	++
TP24: Tourism and Tourist		#	0	#	#	#	#	0?	-	-	#	++	+	+	0	#	#	0	++	+	++	#	+	+	+	+	#	+	++	#

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions							3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution					6. Economic growth	7. Communities, healthy lifestyles and equality								8. Housing		
	Sustainability Objectives		8. Efficient use of land	7. Waste Minimisation	1. Resource Use	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
BDP Policy																														
Facilities																														
TP25: Local Employment	+	+	+	+	+	+	++	++	++	+	#	+	#	#	#	#	#	#	++	++	?	#	#	+	+	#	#	#	#	#
<b>HOMES AND NEIGHBOURHOODS</b>																														
TP26: Sustainable Neighbourhoods	++	++	++	++	++	++	++	++	++	++	+	+	++	+	+	+	#	+	++	++	++	+	+	+	+	+	+	+	+	++
TP27: Location of New Housing	0	#	+	+	+	+	++	++	++	?	?	+	+	?	?	#	#	#	+	#	+	+	+	+	+	+	+	+	+	++
TP28: Housing Trajectory	-	0	?	+	+	+	+	+	+	?	?	?	?	?	?	#	#	#	+	#	+	+	+	+	+	+	+	+	+	++
TP29: Type, Size and Density of New Housing	+	+	++	++	+	+	+	+	+	+	?	+	+	#	#	#	#	#	+	#	+	#	#	+	+	+	#	#	#	++
TP30: Affordable Housing	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	#	#	+	+	++	++	++	+	#	++	

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions						3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution					6. Economic growth	7. Communities, healthy lifestyles and equality							8. Housing			
	8. Efficient use of land	7. Waste Minimisation	1. Resource Use	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Sustainability Objectives	BDP Policy																												
TP31: Housing Regeneration	+	+	++	++	+	+	+	+	+	?	+	+	?	#	#	#	#	+	#	+	#	#	+	+	+	+	#	#	++
TP32: Student Accommodation	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	+	+	#	+	+	?	?	#	#	#	+
TP33: Provision for Gypsies, Travellers and Travelling Showpeople	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	+	++	++	++	++	#	#	#	+
TP34: Existing Housing Stock	+	+	+	?	?	?	+	+	+	#	+	+	#	#	#	#	#	#	#	+	+	+	+	?	?	?	?	?	+
TP35: Education	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	++	++	#	+	+	++	++	+	++	+	++	++
TP36: Health	#	#	#	#	#	#	++	+	+	+	+	++	++	++	++	+	+	+	#	+	+	++	?	++	#	++	+	++	+
<b>CONNECTIVITY</b>																													
TP37: Sustainable Transport Network	+	#	++	++	++	++	++	++	+	#	+	+	#	++	#	#	++	++	+	+	++	+	+	++	++	#	+	#	+

Sustainability Theme	1. Natural resources and waste		2. CO <sub>2</sub> emissions						3. Climate change	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality							8. Housing				
	1. Resource Use	7. Waste Minimisation	8. Efficient use of land	2. Sust. Design & Construction	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsibility	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Sustainability Objectives	BDP Policy																											
TP38: Walking	++	#	++	++	++	++	++	++	+	#	+	#	++	#	#	++	#	#	+	++	+	+	+	+	++	#	+	#
TP39: Cycling	++	#	++	++	++	++	++	++	+	#	+	#	++	#	#	++	#	#	+	++	+	+	+	+	++	#	+	#
TP40: Public Transport	+	#	++	++	++	++	++	++	+	#	+	#	+	#	#	+	++	+	+	++	+	+	+	+	++	#	+	#
TP41: Freight	+	#	+	0	0	?	?	0	+	#	#	#	+	#	#	+	++	#	#	#	#	#	#	#	+	#	#	#
TP42: Low Emission Vehicles	++	++	#	#	+	+	++	0	+	+	+	+	++	+	#	+	+	+	+	+	#	#	#	#	+	#	#	#
TP43: Traffic and Congestion Management	?	#	+	+	#	#	+	?	0	#	?	?	?	0	#	?	++	#	?	+	+	+	+	+	?	#	#	+
TP44: Accessibility Standards for New Development	#	#	#	++	#	#	++	++	+	#	+	#	#	+	#	#	++	++	++	++	+	++	++	++	++	#	++	++
TP45: Digital Communications	+	#	#	#	#	#	#	+	+	#	#	#	#	#	#	#	++	++	#	+	+	+	+	+	#	#	+	#

## 5.4 Policy Analysis

### 5.4.1 Planning for Growth

#### **Policies: PG1 Overall Levels of Growth; PG2 Birmingham as an International City; PG3 Place Making**

#### Commentary

The overall effects of this policy area are likely to be variable, as the policy aspiration of growth inevitably brings benefits and disbenefits associated with increased levels of activity. Resource consumption, for example, is likely to be higher, with attendant increases in travel and challenges associated with the provision of sustainable transport solutions to meet changing levels and patterns of movement. There are also potentially negative effects on some objectives related to resource use, waste, CO<sub>2</sub> emissions and noise related to increased development leading to higher energy consumption and travel.

The effects on communities, health and equality are potentially positive or significantly positive, reflecting wealth generation, the provision of houses, jobs and services, and the intention to balance growth with place-making through high standards of design and the creation of more sustainable transport opportunities, for example. However, given the complexity and the deep-rooted nature of deprivation in some areas, there is a degree of uncertainty in relation to whether deprived areas will fully benefit from these opportunities, with certain areas and groups of the population have historically been disadvantaged in respect of local job opportunities and the environmental quality of their locality. The strategy of regeneration through Growth Areas set out in the spatial delivery of growth (policies GA1-GA8) should begin to address this issue.

The balancing of positive and negative effects will be a particular challenge for the implementation of policy, particularly over the longer term where cumulative and synergistic effects are likely to be felt, and the City-wide contribution can be measured against both past performance and that of comparable urban areas.

In light of fulfilling the demands of the NPPF for sustainable development, one area of particular uncertainty is the extent to which, through the Duty to Co-operate, the City's development requirements can be met. The BDP proposes that around 30,000 dwellings will be provided in adjacent areas, seeking to reflect the interrelationship between the City of Birmingham and its surrounding City-region as evidenced through patterns of commuting, strategic employment and provision of retail and cultural services<sup>18</sup>.

There are significant uncertainties over the likely sustainability implications of accommodating around 30,000 dwellings in surrounding authorities, given the absence of detail at this stage of where this portion of Birmingham's housing need might go. It is understood that exploration of strategic housing and employment provision across the City region is being undertaken through the LEP planning process, and conclusions on the appropriate spatial balance of development could be reached which support or modify the aspirations of the BDP.

<sup>18</sup> See Roger Tym & Partners (January 2013) **Birmingham Strategic Housing Market Assessment**, chapter 13

## What are the likely secondary, cumulative and synergistic effects?

This set of policies could have a large number of interrelated effects, acting cumulatively, such as overall improvements in the quality of life of residents through regeneration activity. However the exact nature of such effects is very difficult to predict and will require close monitoring in terms of where investment and growth is occurring.

## Recommendations

Notwithstanding some potential negative effects associated with some SA Objectives, overall this policy group is effective in communicating the intentions of sustainable growth across Birmingham which will drive the delivery of the Plan's vision and objectives. In doing so, there is perhaps opportunity to cross reference policies or groups of policies which will help to deliver these intentions, such as the intention to create sustainable neighbourhoods (Policy TP26) which reflect and translate many of the growth aspirations.

### 5.4.2 Spatial Delivery of Growth

**Policies: GA1 City Centre; GA2 Greater Icknield; GA3 Aston, Newtown & Lozells AAP area; GA4 Sutton Coldfield; GA7 Bordesley Park AAP area; GA8 Cole Valley Corridor; GA9 Selly Oak & South Edgbaston; GA10 Longbridge AAP area**

This suite of policies form the spatial strategy of regeneration-led growth of the City, centred on a range of localities, through mixed use development and environmental enhancement. The overall effects are likely to be positive and in many cases very positive, reflecting the logic of regeneration as the basis for efficient resource use, community coherence and synergies between aspects of growth. Inevitably there are possible negative effects on some sustainability objectives and uncertainties associated with others. This is most clearly shown in relation to the City Centre where there are significant opportunities to create developments which incorporate outstanding energy efficiency measures, use innovations such as district heating (already pioneered in the City Centre) and which reduce the need to travel. In principle, the benefits of investment in the City Centre should be reflected in greater employment and social opportunities. By contrast the potentially negative effects of concentrating growth here relate to poorer air quality, noise, and uncertainties over the benefits for certain sectors of the community of this growth. For the growth areas focused on existing neighbourhoods, such as in the Cole Valley, the benefits of investment are more clearly positive, given their current problems. Past experience, such as the regeneration of Castle Vale provides a positive role model for the beneficial effects of change.

## What are the likely secondary, cumulative and synergistic effects?

Cumulatively, the concentration of housing and economic growth within the existing urban area, headed by the City Centre and complemented by regeneration-led approaches to peripheral areas, is highly likely to be positive and contribute to the sustainable development of the City as a whole and its sub-region.



## Recommendations

The AAP and masterplan-led approach to these areas provides significantly more detail on implementation and the balancing of economic, social and environmental objectives. Nevertheless, greater emphasis in this suite of policies needs to be placed on achieving balanced growth that is ensuring that strong and rapid change does not cause undesirable side-effects such as the compromising of environmental quality. This is particularly the case with the City Centre but also applies to other growth areas on a lesser scale and in different ways where particular issues such as greenspace or air quality could be prominent. Cross-referencing to selected implementation policies would therefore be beneficial as well as re-assurance over the monitoring of key effects such as the provision of greenspace as part of new development.

### 5.4.3 Green Belt Growth Areas

#### **Policies: GA5 Sustainable Urban Extension; GA6 Peddimore**

The proposed release of Green Belt land for housing and employment development to the west and east of the A38 at Walmley, Sutton Coldfield reflects the need to respond to identified growth needs for the City which cannot realistically be met within the current built-up area as well as (in the case of strategic employment) Birmingham's role as a key regional economic driver<sup>19</sup>. The expansion of the City's footprint inevitably entails negative effects across some sustainability objectives (notably the impact on natural resources and the efficient use of land), but the overall sustainability effects are likely to be positive in the context of creating (in the case of the urban extension) a mixed use development which encourages relative self-containment and could enhance the environmental quality of the area through green infrastructure, for example. The allocation of employment land entails a less positive picture, given the intended land uses, but there are also opportunities for mitigation of effects through good masterplanning. In both cases, the justification release centres on the balance to be struck between accommodating development within the existing urban area and meeting wider development needs. The regeneration-led strategy of the BDP seeks to make best use of existing resources, but recognises that there is a limit to this without an unacceptable degradation of environmental quality (such as building on recreational open spaces), and also the specific needs of the City's and the Region's economy. Careful appraisal of options for Green Belt release has assisted the process of identifying where development is likely to result in least impact and yield greatest benefit.

#### What are the likely secondary, cumulative and synergistic effects?

Cumulatively, whilst there are immediate sustainability impacts associated with the loss of natural resources, the overall sustainability impacts are likely to be positive, associated with the provision of houses and jobs and contributing to the development of the City as a whole and its Region.

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<sup>19</sup> Birmingham City Council (2012) **Employment Land Review** & Warwick Economics and Development (2012) **Employment Land Study for Economic Zones and Key Sectors in Birmingham**

## Recommendations

The masterplan-led approach to these areas will provide more detail on implementation and the mitigation measures which will help to offset negative impacts. Nevertheless, it is important that such change genuinely realises potential benefits associated with development and cross-referencing to other implementation policies would be helpful in this regard.

### 5.4.4 Environment and sustainability

**Policies: TP1 Reducing the City’s Carbon Footprint; TP2 Adapting to Climate Change; TP3 Sustainable Construction; TP4 Low Carbon Energy Generation; TP5 Low Carbon Economy; TP6 Managing Flood Risk**

#### Commentary

These policies address the climate change agenda through a variety of means, with the net effect likely to be a positive contribution to securing sustainable development over the long term, as measured by indicators such as carbon reduction and the ‘proofing’ of the City against climate change effects. As with overall growth for the City, the long-term effectiveness of the policy approach will be dependent upon the quality of policy implementation on individual sites which cumulatively contribute to the City’s performance. Innovation in energy generation (such as neighbourhood energy schemes) will be required, and given the scale of the City, there could be significant opportunities to experiment and adopt leading-edge technologies. Whilst the promotion of Sustainable Neighbourhoods could provide opportunities through new development to address climate change, the policies may have less effect on existing communities where less development is foreseen, including those living in deprived neighbourhoods. Much may depend on how the Plan’s policies together with Birmingham’s Climate Change Action Plan are implemented. However, in applying the CHP policy to new developments, the refurbishment of municipal housing estates would provide an opportunity for more CHP schemes to be installed which would be beneficial for those living in social housing.

#### What are the likely secondary, cumulative and synergistic effects?

Implemented in full and acting in concert, the cumulative effect of these policies should be significant over the longer term, resulting in a tangible shift in the City’s contribution to climate change and its ability to respond to its impacts.

## Recommendations

Whilst this suite of policies is in the main complementary to one another, they would benefit from more cross-referencing demonstrating key relationships, between Green Infrastructure and climate change for example.

**Policies: TP7 Green Infrastructure Network; TP8 Biodiversity and Geodiversity; TP9 Open Space, Playing Fields and Allotments; TP10 Green Belt; TP11 Sports Facilities; TP12 Historic Environment**

## Commentary

Perceived quality of life for citizens, workers and visitors is a good indicator of sustainability and this suite of policies should on balance help to secure a range of benefits which are both needed and demanded. These policies have a broadly positive effect on the SA objectives, although the extent to which they are likely to make a difference to the quality of life across the City will be dependent upon their interaction both between themselves and with other policy areas, and implementation over the plan period and beyond. Perhaps more than any other policy area, the linkages with other strategies and programmes will be fundamental to securing effective outcomes. The principle of establishing a sufficient quantity of accessible, good quality open space is likely to lead to positive social effects, although there is some uncertainty regarding the effects as quality standards are not clearly defined in the policy or supporting text. Policies covering sport and recreational uses and this should deliver a range of sustainability benefits. The dual use of school sports facilities will be encouraged and this will have the advantage of opening up these facilities to the wider community which could be good for community cohesion and social integration.

## What are the likely secondary, cumulative and synergistic effects?

There are significant secondary effects from the provision of open space and recreation facilities in terms of health, adapting to climate change (through flood risk management), biodiversity and landscape. Open space is likely to have cumulative effects in relation to overall quality of life improvements allied to improvements in housing, transport and employment opportunities. This policy will work together with other policies including that on Green Infrastructure to deliver cumulative benefits.

## Recommendations

The supporting text of Policy TP9 (Open Space, Playing Fields and Allotments) would benefit from further clearer links to Policy TP7 (Green Infrastructure) (and vice versa) in order to help demonstrate how these closely related policies are related and need to be delivered together.

## **Policies TP13 Sustainable Management of the City's Waste; TP14 New and Existing Waste Facilities; TP15 Location of Waste Management Facilities**

## Commentary

These policies should on balance advance sustainability objectives particularly in relation to natural resource use and CO<sub>2</sub> emissions, although the overall impact effect will be dependent on the quality of implementation at specific sites and require a long-term perspective on effectiveness. The policies have a number of uncertain effects as information on the potential requirements for new non-landfill capacity is limited. There are significant opportunities associated with the creation of innovative approaches to waste management and the linking of this to economic opportunities and neighbourhood management. An overall reduction in reliance in landfill for Birmingham's waste is likely to improve environmental conditions in the medium to long term. Expansion of existing waste sites, the creation of new facilities, and/or the use of different technologies (e.g. gasification and pyrolysis) may lead to localised environmental effects and there will therefore be a need for developers and

planners proposing any new or expanded waste management sites to undertake an assessment on the impact on the surrounding population.

### What are the likely secondary, cumulative and synergistic effects?

Likely to be beneficial over the longer term as more efficient and effective waste disposal methods are put in place with cumulative benefits for reducing climate change alongside other initiatives to reduce emissions. Achieving synergistic benefits could be significant on City-wide basis and be representative of the City's willingness and ability to find innovative solutions to this fundamental issue of sustainability.

### Recommendations

Ideally this group of policies should set out in quantitative terms the likely capacity requirements which are referred to. Further justification of the approach should be set out in the supporting text.

#### 5.4.5 Economy and network of centres

**Policies: TP16 Portfolio of Employment Land and Premises; TP17 Core Employment Areas; TP18 Regional Investment Sites;; TP19 Protection of Employment Land; TP24 Tourism and Tourist Facilities; TP25 Local Employment**

### Commentary

The keynote of the strategy for employment is a diversity of provision through a hierarchical approach which matches population growth and contributes to the City's overall performance. Whilst the net sustainability effect of the policy area should be positive, there will inevitably be, as with other policy areas, trade-offs which could compromise sustainability performance, notably transport and the effect of growth on the natural environment in particular localities. Proposals to retain and protect core employment areas, to develop regional investment sites, and to maintain a portfolio of employment sites should be beneficial to the unemployed. Indeed the Strategy recognises the need to create employment sites close to areas of deprivation and high unemployment e.g. East Aston. The gap between the job opportunities and the ability of those in areas of need to fill them remains a concern. In particular, the strategy of providing sites for high technology development should create opportunities for diversifying the economy away from a traditional reliance on manufacturing. However, these are likely to be highly skilled jobs which may be less available to existing lower skilled workers. The policy may not offer more employment opportunities to those already at a disadvantage in the labour market. Close monitoring of these effects is likely to be required.

Some minor negative effects in respect of promoting tourism and tourist facilities have been identified, relation to travel reduction and climate change, as well as neutral effects across related objectives such as pollution and sustainable transport. Given the City's ambitions to be an international tourism and business destination, it is inevitable that such negative impacts will occur, and it would perhaps be helpful if the policy acknowledged these pressures and where other policies such as sustainable transport might help to ameliorate them.

### What are the likely secondary, cumulative and synergistic effects?

Cumulatively, implementation of the policies should help to create a City with a more diverse and thus robust employment base, in so doing providing benefits across the City in terms of quality of life for all residents. The implementation of the policies will have to be adaptable to meet prevailing macro (i.e. national) and micro (i.e. local) economic conditions. The effects could therefore be unpredictable in both the short, medium and longer term.

### Recommendations

Whilst the package of new employment land proposals and protection of key employment areas is likely to be beneficial overall, greater clarification would be helpful on how the benefits will be spread City-wide and complement other policy aspirations. Reference to partner strategies on education and social inclusion could be helpful in this regard, as would cross-referencing of policies, for example in relation to tourism and environmental protection.

**Policies: TP20 The Network and Hierarchy of Centres; TP21 Convenience Retail Provision; TP22 Small Shops and Independent Retailing; TP23 Promoting a Diversity of Uses Within Centres**

### Commentary

The proposed policies perform relatively well against the SA objectives. The approach put forward should, if well implemented, be a fundamental part of a sustainable city, with locally-focused solutions to living and working, reducing the need to travel and creating a greater sense of place and community. It is acknowledged that the level and mix of retail service provision will vary over time and general macro-economic conditions, but investing in specific areas which are best suited to retaining a service function should help to create more robust neighbourhoods. Gap areas for convenience retail shopping have been identified. The Strategy states that the City Council will work with developers, retailers and local traders through the area-based plans to address local retail needs, but how this will affect those living in areas of retail need will depend on implementation.

### What are the likely secondary, cumulative and synergistic effects?

Cumulative and synergistic effects could be significant as the aspirations for greater self-containment are realised and spread to adjacent areas and become models for the establishment of the approach elsewhere in the City. This could lead to significant effects on the economy and on quality of life across the City.

### Recommendations

Greater cross-referencing with supporting policies would be helpful, particularly in respect of transport and connectivity, along with the relationship between these policies and the creation of Sustainable Neighbourhoods. Further supporting text regarding the justification for the hierarchy of centres would be beneficial.

## 5.4.6 Homes and Neighbourhoods

**Policies: TP26 Sustainable Neighbourhoods; TP27 The Location of New Housing; TP28 The Housing Trajectory; TP35 Education; TP36 Health**

### Commentary

The proposed policies perform well in terms of their potential to deliver positive sustainability effects, although there is some uncertainty regarding environmental effects which will depend on the scale and exact locations of housing development. In so doing, there is the opportunity to address a range of other issues such as linking housing and jobs, provision of accessible greenspace and the creation of a sense of place. Much depends upon implementation, but in principle, the range and direction of policies associated with housing provision should help to advance sustainability across the City. Taking a long-term perspective is particularly important as decisions on the location and type of housing are fundamental in setting the character of the City over the next 50-100 years. It is noted that the policy on Sustainable Neighbourhoods requires all new development to be accessible to jobs, shops and services by transport modes other than the car, and these aspects are further elaborated in other policies in the BDP. New housing developments also offer the opportunity to create sustainable places to live with services such as retail, health, leisure and community facilities located within the development so that disabled people, young children, older people and carers have accessible facilities within easy reach. This is also likely to engender a sense of community.

### What are the likely secondary, cumulative and synergistic effects?

Cumulatively, the effects could be significant where the policies begin to affect relatively large proportions of the affordable housing market, for example, particularly in specific locations where demand is particularly acute.

### Recommendations

Reference to Sustainable neighbourhoods in all related policies would be helpful in demonstrating an integrated approach to housing strategy across the City, anticipating future approaches to its spatial character.

**Policies: TP29 The Type and Size of New Housing; TP30 Affordable Housing; TP31 Housing Regeneration; TP32 Student Accommodation; TP33 Provision for Gypsies, Travellers and Travelling Showpeople; TP34 The Existing Housing Stock**

### Commentary

The effects of these policies are likely to be broadly positive although there is some uncertainty regarding some environmental effects which will depend on the detail of implementation. Plans for the demolition, regeneration and refurbishment on municipal housing estates in Policy TP31 should impact positively on lower income households, if better housing is provided. The policy does not make it clear whether the replacement of housing will maintain the existing mix and tenure of dwellings. There could be differing effects depending on whether there is direct replacement of social housing on these estates or if a mix of tenures is provided. The former

provides less opportunity to create a balanced community whilst the latter might potentially lead to net loss of social housing. The policy reference to improving other related community facilities should have beneficial sustainability effects. There could be uncertainty over achieving the equality objective through Policy TP33 which identified site requirements to 2017 only and appears to rely on criteria within the policy for site delivery.

### What are the likely secondary, cumulative and synergistic effects?

An improvement in the existing housing stock combined with design standards is likely to have secondary effects on overall quality of life. Combined with other plan policies and initiatives there could be significant positive cumulative effects on social and environmental conditions across the City.

### Recommendations

Further explanation could be given regarding mix and tenure of replacement housing and whether balanced communities can be encouraged when municipal housing estates are renewed without a loss of social housing.

#### 5.4.7 Connectivity

**Policies: TP37 A Sustainable Transport Network; TP38 Walking; TP39 Cycling; TP40 Public Transport; TP41 Freight; TP42 Low Emission Vehicles; TP43 Traffic and Congestion Management; TP44: Accessibility Standards for New Development; TP45: Digital Communications**

### Commentary

Transport is one of the key challenges for sustainable development, both in terms of reducing the need to travel and the impact of the modes of travel when movement does occur. The focus of the policies on creating a more sustainable city-wide transport network and innovation through digital connectivity is likely to have positive effects on SA objectives relating to CO<sub>2</sub> emissions, the economy and communities. Specific policies relating to cycling and walking should yield positive effects, although there is the opportunity to more explicitly tie these into complementary policies such as those relating to healthy and sustainable communities to ensuring the maximum benefits are secured. The accessibility standards for new development are useful and should help to directly benefit new and existing residents.

Overall the policies have been assessed as having generally positive effects against the majority of SA Objectives, although there are a number of uncertainties associated with the Policy TP43 on Traffic and Congestion Management. Here, the effects of investment in the road network on natural resources and pollution load, for example, could yield mixed results according to the character of specific localities. The policy promotes a diversity of approaches to managing the highway network across the City which taken together should lead to more sustainable outcomes, although close monitoring of their effects will be required.



## What are the likely secondary, cumulative and synergistic effects?

The cumulative and synergistic effects will depend upon the interaction between this policy area and those of housing and employment, where integration in provision will be critical. Close monitoring of these interactions will be necessary to help ensure and that unintended consequences of policy implementation are identified.

## Recommendations

Further consideration should be given to how the connectivity policies are likely to work in concert and with other policies throughout the Plan to achieve more sustainable outcomes for the BDP as a whole. For example, could the policy relating to cycling be linked to those on green infrastructure, health promotion and sustainable communities? Reference to clear strategies which will help to deliver the goals of sustainable transport policies would be helpful in promoting an integrated, City-wide approach.

## 5.5 Observations on the Performance of the Policies by Sustainability Theme including cumulative, secondary and synergistic effects

### 5.5.1 Overview

The analysis presented in Table 5.3 shows the sustainability performance of the policies to be largely positive, with many significant positive relationships and no instances of significant negative effects. The principle of a regeneration-led strategy, advocated by the BDP since the issues and options stage represents a logical and justifiable strategy approach for a City the size and complexity of Birmingham which contains significant tracts of brownfield land. These redevelopment opportunities already exist or will become available as part of the development cycle, along with areas which require rejuvenation, economically, socially and environmentally.

Many sustainability problems result from the progressive accumulation of small and indirect effects and the failure to address these are develop and which induce further changes, notably the deterioration in housing quality, local retail decline and absence of open space management. There is inevitable uncertainty associated with trying to anticipate these interactions and impacts, but where negative effects are predicted, these reflect the likely impacts of growth in respect of additional resource use, waste generation and pollution. To an extent, these are inevitable by-products of growth, although as intended in a number of implementation policies can be mitigated through striving for higher standards of building design and encouraging behavioural change in transport habits, for example.

Overall the BDP will help to deliver sustainable development for the City, directly and indirectly improving quality of life for residents, workers and visitors through the creation of a housing stock and services which better match needs, job and wealth creation which fit the City's multiple economic roles, a sustainable transport system, and an environmental setting which responds to the demands of growth and the challenges associated with climate change. These aspirations will be supported by various corporate initiatives to support sustainable growth, notably Leading

Green City (March 2013) which sets out an ambitious vision for re-casting Birmingham's environmental footprint through energy generation and use and travel behaviour, and supporting strategies<sup>20</sup>.

The impacts of the BDP proposals acting and in combination with those of adjacent authorities will require close monitoring. The BDP relies upon neighbouring authorities for the delivery of its growth and these requirements will inevitably impact upon sustainability issues in these areas, notably on greenfield land take, traffic generation and service provision. Growth across the sub-region and region as a whole resulting from the plans of all authorities (albeit at different stages) is likely to result in a greater strength and complexity of cross-area commuting patterns, with consequences for key indicators such as air quality, congestion and neighbourhood coherence. The extent to which these impacts can be managed will depend upon the effectiveness of mitigation policies in BPD and other plans (such as those promoting a modal shift and greater self-containment) and their close monitoring will be required.

As part of the assessment no significant negative effects were encountered, reflecting the pragmatic tone of the policies and the balanced approach to sustainable development which is being strived for. The assessment, perhaps inevitably, is characterised by numerous instances of uncertainty, either in the relationship between policies and sustainability objectives or whether a particular effect will be realised. This reflects the contingent nature of spatial planning, which relies on wider interactions such as economic health. However, the BDP seeks to create the framework within which there can be balanced economic growth whilst providing for the needs of existing and future residents, in the context of environmental protection and enhancement.

### 5.5.2 Natural Resources and Waste

The strategy of regeneration which seeks to accommodate a significant proportion of the proposed growth within the urban area will help to protect greenfield land within the City boundary and beyond. The greenfield development that is proposed is likely to result in negative effects being the loss of a resource, but this is counterbalanced by the positive attributes of proposals for an urban extension. The creation of waste is an inevitable by-product of growth and will have negative effects where the City already struggles to manage its waste. Proposals for waste minimisation and management across the City (Policies TP13-15) as a whole should help to temper this impact, although the impacts of their implementation will need to be closely monitored.

### 5.5.3 CO<sub>2</sub> Emissions

New development and associated travel activity will contribute to CO<sub>2</sub> emissions which, in turn, affect the City's contribution to climate change. However, the BPDs strategy of seeking to develop sustainable neighbourhoods (Policy TP26), promote energy efficiency (Policies TP1 and TP3) and change travel behaviour (TP38-40) will all contribute to mitigating these effects and meeting the City's ambitious targets for CO<sub>2</sub> reduction over the longer term. Nevertheless, overall emissions which result from the interaction of these policies will require close

<sup>20</sup> Your Green and Healthy City SPD (2013); Birmingham's Health and Well-being Strategy (2013); Birmingham's Green Living Spaces Plan (2012)

monitoring to judge their effectiveness and potential adjustments made in future plan reviews if progress is not being made.

#### 5.5.4 Climate Change Adaptation

The ability of the City to adapt to the effects of climate change will depend on both direct intervention through provision for increased flood risk, and city-greening to cope with higher summer temperatures, for example, but also in indirect influence over travel behaviour through encouraging more walking, cycling and the use of sustainable transport modes (Policies TP38-40).

#### 5.5.5 Historic Environment, Landscape, Biodiversity and Geodiversity

The policies focused on the protection and enhancement of biodiversity, geodiversity and cultural heritage assets (Policies TP8; TP12) will overall have a positive impact on sustainability objectives. There are potential areas of negative impacts and uncertainty, however, associated, for example, with the impacts of regeneration on biodiversity assets (where sites have acquired biodiversity value) and how efforts to mitigate and adapt to climate change might affect the character and use of natural assets where compromises might have to be made on the use of available land. This could include the development of sustainable drainage schemes and the conversion of buildings to be more energy efficient. Equally, policies promoting use of brownfield land and the ‘densification’ of the urban area generally (Policies TP26 and TP27) could compromise the existing character of parts of the City. Generally however, the proposed policies, in combination with strategies for implementation, will help to promote the interests and contribution of these factors to the improvement of quality of life for residents, workers and visitors across Birmingham.

#### 5.5.6 Pollution

Pollution is an undesirable consequence of growth and human activity and there is an inevitable tension between policies which promote economic growth, housing development and infrastructure provision and the City-wide effects which will accompany them. This could particularly be the case with the promotion of Birmingham as an International City (Policy PG2), for example, which entails increases in flows of businesses and visitors. Policies promoting energy efficiency, modal shift in transport use and mixed use developments will help to temper the generation and impacts of pollution through improving air quality (the whole of the City being an AQMA), for example, but close monitoring of these effects will be required notably in relation to noise which can be a significant issue in some areas.

#### 5.5.7 Economic Growth

The sustainable growth of the City’s economy is an important focus of the BDP, to be realised through a structured approach to the protection and provision of strategic and locally-significant employment land and policies which promote economic diversification (Policies TP16-25). Encouraging a mix of uses in the proposed growth areas will also help to achieve a balanced outcome, particularly for areas which require comprehensive regeneration and

where the promotion of community identity is important. The important links between economic growth and transport provision and investment are recognised (Policies TP17 and 18), although the precise outcomes of these interactions is not certain, particularly in respect of the overall and more localised effects of congestion.

#### 5.5.8 Communities, Healthy Lifestyles and Equality

The overall effect of the BDP policies on the communities across the City should prove to be positive, as measured by policies which promote sustainable communities through good urban design, access to services and the provision of recreational opportunities which will help to improve health (Policies TP7, 9, 11, 26). However, the deep and wide-ranging issues associated with deprivation in particular parts of the City demand attention across policy areas throughout the BDP and the outcomes (notwithstanding examples of good practice) can be difficult to predict and the problems intractable. The balance between housing growth and access to services will have to be closely monitored, particularly where large-scale re-development is anticipated.

#### 5.5.9 Housing

Access to good quality, affordable housing in the right places is a key objective of the BDP and the proposed strategy and associated policies should help to ensure that this is worked towards, through a combination of market provision and intervention by housing associations, the latter being of particular significance in areas of weak demand, as is the setting of targets for the provision of affordable housing in market-led developments. Whether the outcomes aspired to will be achieved in practice depends on the interaction of an array of factors, but the BDP sets an appropriate framework through which there can, over the longer term, be balanced provision of housing for all.



## 6. Overall Effects of the BDP and Proposed Mitigation and Monitoring

### 6.1 Overall Effects and Uncertainties

The approach to the distribution of new development seeks to provide a reasonable balance between accommodating growth within the existing urban area (accounting for the majority of the housing and employment requirement), and providing for additional growth requirements through the allocation of greenfield land, using the principles of a sustainable urban extension to guide residential-led development, whilst also allocating land for strategic industrial purposes.

The BDP's proposals for delivering growth across the City in a balanced fashion reflect the aspirations of the NPPF for delivering sustainable development. The NPPF identifies that: *"The purpose of the planning system is to contribute to the achievement of sustainable development"* (paragraph 6), that *"Local Plans are the key to delivering sustainable development that reflects the vision and aspirations of local communities"* (paragraph 150), and that: *"local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three"* (paragraph 152). The BDP seeks to demonstrate how these aspirations might be achieved in the context of significant growth in levels of housing and employment, making best use of existing assets, notably brownfield land and the potential for investment in strategic transport infrastructure to improve the functioning of the City.

In light of fulfilling the demands of the NPPF for sustainable development, one area of particular uncertainty is the extent to which, through the Duty to Co-operate, the City's development requirements can be met. The BDP proposes that around 30,000 dwellings will be provided in adjacent areas, seeking to reflect the interrelationship between the City of Birmingham and its surrounding city-region as evidenced through patterns of commuting, strategic employment and provision of retail and cultural services.

There are significant uncertainties over the likely sustainability implications of accommodating around 30,000 dwellings in surrounding authorities, given the absence of detail at this stage of where this portion of Birmingham's housing need might go. It is understood that exploration of strategic housing and employment provision across the City region is being undertaken through the LEP planning process, and conclusions on the appropriate spatial balance of development could be reached which support or modify the aspirations of the BDP.

### 6.2 Recommendations and SA/SEA Influence on the Development of the BDP

One function of the SA/SEA process is to provide recommendations on how the performance of the BPD might be improved through adjustment to the vision, objectives and policies being proposed. Based on the analysis in section 5 and policy analysis in Appendix A, Table 6.1 sets out recommendations for adjusting the BDP to enhance the sustainability of the outcomes associated with implementing the proposed plan.

**Table 6.1 Recommendations to Improve the Sustainability Performance of the Birmingham Development Plan**

<b>Topic/Policy</b>	<b>Recommendation</b>
<b>VISION, OBJECTIVES and STRATEGY</b>	
BDP Vision	No recommendations
Strategic Objectives	The BDP Objectives has been appraised against the SA Objectives and found to be broadly compatible. Where potential incompatibilities exist, these are inherent (for example between growth and resource use), or can be mitigated through the implementation of policies throughout the plan (for example in relation to the promotion of sustainable neighbourhoods as part of housing growth).
Strategy	No recommendations, apart from close monitoring of the impacts of policy implementation in order to ensure that this is effective and meeting the aspirations set out in the objectives and strategy.
<b>PLANNING FOR GROWTH</b>	
PG1: Overall Levels of Growth	Notwithstanding some potential negative effects associated with some SA Objectives, overall this policy group is effective in communicating the intentions of sustainable growth across Birmingham which will drive the delivery of the Plan's vision and objectives. In doing so, there is perhaps opportunity to cross reference policies or groups of policies which will help to deliver these intentions, such as the intention to create sustainable neighbourhoods (Policy TP26) which reflect and translate many of the growth aspirations.  PG1: Reference in the policy to the role of regeneration and the creation of sustainable neighbourhoods would be a useful addition.  PG2: The policy might be strengthened through the addition of reference to the importance of protecting the existing environmental qualities of the City.  PG3: The policy might benefit from reference t the creation of 'sustainable neighbourhoods' (TP26) and defining precisely how these might look and function.
PG2: Birmingham as an International City	
PG3: Place Making	
<b>SPATIAL DELIVERY OF GROWTH</b>	
GA1: City Centre	The AAP and masterplan-led approach to these areas provides significantly more detail on implementation and the balancing of economic, social and environmental objectives. Nevertheless, greater emphasis in this suite of policies needs to be placed on achieving balanced growth that is ensuring that strong and rapid change does not cause undesirable side-effects such as the compromising of environmental quality. This is particularly the case with the City Centre but also applies to other growth areas on a lesser scale and in different ways where particular issues such as greenspace or air quality could be prominent. Cross-referencing to selected implementation policies would therefore be beneficial as well as re-assurance over the monitoring of key effects such as the provision of greenspace as part of new development.  GA1: The dangers of benefits not spreading to deprived communities must be recognised, as should the need to ensure that environmental enhancement accompanies economic growth and physical change, and the role of independent retailing in adding to character to the City. The policy could be strengthened by reference to these issues.  GA4: The policy could perhaps be improved through reference to environment and design quality, sense of place and synergy with the overall strategy of the BDP.  GA9: The policy could useful include reference to how the area might function in combination with the intended investment into the City Centre.
GA2: Greater Icknield	
GA3: Aston, Newtown and Lozells AAP area	
GA4: Sutton Coldfield	
GA5: Sustainable Urban Extension	
GA6: Peddimore	
GA7: Bordesley Park AAP area	
GA8: Cole Valley Triangle	
GA9: Selly Oak and South Edgbaston	
GA10: Longbridge AAP area	
<b>ENVIRONMENT AND SUSTAINABILITY</b>	
TP1: Reducing the City's Carbon Footprint	Whilst this suite of policies is in the main complementary to one another, they would benefit from more cross-referencing demonstrating key relationships, between Green Infrastructure and climate change for example.  The supporting text of Policy TP9 (Open Space, Playing Fields and Allotments) would benefit from further clearer links to Policy TP7 (Green Infrastructure) (and vice versa) in order to help demonstrate how these closely related policies are related and need to be delivered together.  Ideally this group of policies should set out in quantitative terms the likely capacity
TP2: Adapting to Climate Change	
TP3: Sustainable Construction	
TP4: Low Carbon Energy Generation	
TP5: Low Carbon Economy	



Topic/Policy	Recommendation
TP6: Managing Flood Risk TP7: Green Infrastructure Network TP8: Biodiversity and Geodiversity TP9: Open Space, Playing Fields and Allotments TP10: Green Belt TP11: Sports Facilities TP12: Historic Assets TP13: Sustainable Management of the City's Waste TP14: New and Existing Waste Facilities TP15: Location of Waste Management Facilities	requirements which are referred to. Further justification of the approach should be set out in the supporting text.
<b>ECONOMY AND NETWORK OF CENTRES</b>	
TP16: Portfolio of Employment Land and Premises TP17: Core Employment Areas TP18: Regional Investment Sites TP19: Protection of Employment Land TP20: Network and Hierarchy of Centres TP21: Convenience Retail Provision TP22: Small Shops and Independent Retailing TP23: Promoting a Diversity of Uses within Centres TP24: Tourism and Tourist Facilities TP25: Local Employment	Whilst the package of new employment land proposals and protection of key employment areas is likely to be beneficial overall, greater clarification would be helpful on how the benefits will be spread City-wide and complement other policy aspirations. Reference to partner strategies on education and social inclusion could be helpful in this regard, as would cross-referencing of policies, for example in relation to tourism and environmental protection. TP18: The interaction with other policies for employment provision (notably TP16, TP17 and TP10) could perhaps be identified. TP19: The interaction with other policies for employment provision (notably TP16, TP17, TP18 and TP25) could perhaps be identified. TP20: The relationship with complementary policies such as TP16, TP23, TP25 and TP26 could be referenced to identify the importance of a strategic overview of the type and location of employment provision. What, for example, might be the implications of City Centre growth and how is the competition between centres such as Longbridge and Northfield likely to be managed to ensure the sustainable growth of each? TP21, 22& 23: The policies could perhaps be enhanced through reference to the promotion of sustainable neighbourhoods.
<b>HOMES AND NEIGHBOURHOODS</b>	
TP26: Sustainable Neighbourhoods TP27: Location of New Housing TP28: Housing Trajectory TP29: Type and Size of New Housing TP30: Affordable Housing TP31: Housing Regeneration TP32: Student Accommodation TP33: Provision for Gypsies, Travellers and Travelling Showpeople	Reference to Sustainable neighbourhoods in all related policies would be helpful in demonstrating an integrated approach to housing strategy across the City, anticipating future approaches to its spatial character. TP26: What the policy currently doesn't do and which might be strengthened by is reference strategies for the delivery of these aspirations, sectorally and spatially. In principle, many of the proposed regeneration areas (Aston, Bordesley, Icknield Loop, Cole Valley) could pioneer some of the initiatives, although much will depend upon available investment. Further explanation could be given regarding mix and tenure of replacement housing and whether balanced communities can be encouraged when municipal housing estates are renewed without a loss of social housing.

Topic/Policy	Recommendation
TP34: The Existing Housing Stock	
TP35: Education	No recommendations
TP35: Health	No recommendations
<b>CONNECTIVITY</b>	
TP37: Sustainable Transport Network	Further consideration should be given to how the connectivity policies are likely to work in concert and with other policies throughout the Plan to achieve more sustainable outcomes for the BDP as a whole. For example, could the policy relating to cycling be linked to those on green infrastructure, health promotion and sustainable communities? Reference to clear strategies which will help to deliver the goals of sustainable transport policies would be helpful in promoting an integrated, City-wide approach.
TP38: Walking	
TP39: Cycling	
TP40: Public Transport	TP39: The policy could benefit from cross-referencing with other Policies such as TP25: Sustainable Neighbourhoods and the range of policies on encouraging sustainable transport.
TP41: Freight	
TP42: Low Emission Vehicles	TP40: Implementation of the policy will be of particular importance in realising Sustainable Neighbourhoods and to this end cross-referencing to Policy TP26 would be helpful in demonstrating an integrated approach.
TP43: Traffic and Congestion Management	
TP44: Accessibility Standards for New Development	
TP45: Digital Communications	

The SA/SEA process has helped to shape the BDP through a number of means, including:

- close working between consultants and plan officers during the development of the BDP;
- a Scoping workshop attended by a wide range of stakeholders to help identify key issues and discuss how the BDP could best respond to their interests;
- assessment of emerging stages of the BDP, including options and policies, for: issues and options, preferred options, further options and the Pre-Submission BDP; and
- a seminar on sustainable neighbourhoods involving a wide range of community stakeholders to explore the idea and practice of sustainable neighbourhoods, in turn helping to inform their role within the BDP.

### 6.3 Proposed Mitigation and Monitoring

It is a requirement of the SEA Directive to establish how the significant sustainability effects of implementing the plan, programme or strategy will be monitored, helping to:

- identify the significant effects of the plan;
- isolate unforeseen effects;
- ensure that there is action to offset any undesirable significant effects; and
- provide a baseline for ongoing monitoring of the plan.

However, as ODPM former guidance on Sustainability Appraisal of RSS and LDDs noted that “it is not necessary to monitor everything, or monitor an effect indefinitely. Instead monitoring needs to be focused on significant sustainability effects”.

Table 6.2 sets out proposed indicators and targets for monitoring the sustainability impacts of the BDP. These will be used to inform the development of a draft monitoring framework as part of the SA Report which will accompany the Submission BPD. The final monitoring framework will be published alongside the adopted BDP and accompany BCC’s AMR, and could share some of the indicators in the AMR.

**Table 6.2 SA Objectives, Appraisal Criteria, Indicators and Targets**

SA Theme	SA Objectives	Potential Indicators
1. Natural resources and waste	<b>1. Resource Use:</b> Use natural resources such as water and minerals efficiently.	<ul style="list-style-type: none"> <li>Minerals, construction materials and water demand arising from new development.</li> </ul>
	<b>7. Waste Reduction and Minimisation:</b> Encourage and enable waste minimisation, reuse, recycling and recovery.	<ul style="list-style-type: none"> <li>Proportion of waste recycled.</li> <li>Proportion of waste sent to EfW plants.</li> <li>Proportion of waste landfilled.</li> </ul>
	<b>8. Efficient use of land:</b> Encourage land use and development that optimises the use of previously developed land and buildings.	<ul style="list-style-type: none"> <li>Percentage of dwellings built on previously developed land.</li> <li>Average density of new housing.</li> </ul>
2. CO <sub>2</sub> emissions	<b>2. Sustainable design, construction and maintenance:</b> Promote and ensure high standards of sustainable resource-efficient design, construction and maintenance of buildings, where possible exceeding the requirements of the Building Regulations.	<ul style="list-style-type: none"> <li>Number of new buildings exceeding Building Regulations.</li> </ul>
	<b>3. Renewable Energy:</b> Encourage development of alternative and renewable resources.	<ul style="list-style-type: none"> <li>Renewable energy capacity installed by type.</li> </ul>
	<b>4. Energy Efficiency:</b> Reduce overall energy use through energy efficiency.	<ul style="list-style-type: none"> <li>Number of new buildings exceeding Building Regulations.</li> <li>Energy efficiency of the housing stock.</li> </ul>
	<b>5. Sustainable Transport:</b> 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.	<ul style="list-style-type: none"> <li>Percentage of trips by public transport into Birmingham City Centre.</li> <li>Proportion of trips made by bicycle.</li> </ul>
	<b>6. Reduce the need to travel:</b> Ensure development reduces the need to travel.	<ul style="list-style-type: none"> <li>Road traffic mileage and congestion.</li> </ul>
<b>9. Reduce climate change:</b> Minimise Birmingham’s contribution to the causes of climate change by reducing emissions of greenhouse gases from transport, domestic, commercial and industrial sources.	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions by source.</li> <li>Energy efficiency of the building stock.</li> </ul>	

SA Theme	SA Objectives	Potential Indicators
3. Climate change adaptation	<b>10. Manage Climate Change:</b> Implement a managed response to the unavoidable impacts of climate change, ensuring that the design and planning process takes into account predicted changes in Birmingham's climate including flood risk.	<ul style="list-style-type: none"> <li>Number of properties at risk from flooding.</li> <li>New development allowed in Flood Zones 2 and 3</li> <li>New development incorporating SuDS.</li> </ul>
4. Historic environment, landscape, biodiversity and geodiversity	<b>12. Built and Historic Environment:</b> Value, protect, enhance and restore Birmingham's built and historic environment and landscape.	<ul style="list-style-type: none"> <li>Listed Building/Ancient Monuments at risk.</li> <li>Conservation Areas with management plans.</li> <li>Applications requiring archaeological mitigation strategies.</li> </ul>
	<b>13. Natural Landscape:</b> Value, protect, enhance and restore Birmingham's natural landscape.	<ul style="list-style-type: none"> <li>Where land is not managed for biodiversity, active management for recreation.</li> </ul>
	<b>14. Biodiversity:</b> Value, protect, maintain, restore and re-create local biodiversity and geodiversity.	<ul style="list-style-type: none"> <li>Area of habitat under management.</li> <li>Area of habitat in good and improving condition.</li> <li>Area of habitat created/managed as part of off-setting.</li> <li>Area of habitat created directly as part of new development.</li> </ul>
5. Pollution	<b>15. Air Quality:</b> Minimise air pollution levels and create good quality air.	<ul style="list-style-type: none"> <li>Changes in Birmingham's AQMA.</li> </ul>
	<b>16. Water Quality:</b> Minimise water pollution levels and create good quality water.	<ul style="list-style-type: none"> <li>Watercourses of good chemical and biological quality.</li> </ul>
	<b>17. Soil Quality:</b> Minimise soil pollution levels and create good quality soil.	<ul style="list-style-type: none"> <li>Area of contaminated land reclaimed.</li> </ul>
	<b>18. Noise:</b> Minimise noise pollution levels.	<ul style="list-style-type: none"> <li>No specific indicator identified.</li> </ul>
6. Economic growth	<b>20. Economy and Equality:</b> Achieve a strong, stable and sustainable economy and prosperity for the benefit of all of Birmingham's inhabitants.	<ul style="list-style-type: none"> <li>Gross Value Added.</li> <li>Employment rates.</li> <li>Average earnings</li> <li>Business diversity.</li> <li>Business creation.</li> <li>Tourism spend.</li> <li>Employment land availability.</li> <li>Business premises vacancy rates.</li> <li>Employment land lost to other uses.</li> </ul>
	<b>21. Learning and Skills:</b> Promote investment in future prosperity, including ongoing investment and engagement in learning and skills development.	<ul style="list-style-type: none"> <li>Access to pre-school education/care.</li> <li>Educational attainment.</li> <li>Access to further education opportunities.</li> <li>Access to apprenticeships in areas of particular needs.</li> <li>Business surveys of staff/skill shortages.</li> </ul>
7. Communities, healthy lifestyles and equality	<b>11. Sense of Place:</b> Encourage land use and development that creates and sustains well-designed, high quality built environments that incorporate green space, encourage biodiversity, and promote local distinctiveness and sense of place.	<ul style="list-style-type: none"> <li>Application of City-wide design guidance.</li> <li>Developments granted with design-specific conditions.</li> </ul>

SA Theme	SA Objectives	Potential Indicators
	<p><b>19. Social and Environmental Responsibility:</b> Encourage corporate social and environmental responsibility, with local organisations and agencies leading by example.</p>	<ul style="list-style-type: none"> <li>• Participation by business in community enhancement schemes (e.g. skills development, volunteering, environmental works).</li> </ul>
	<p><b>22. Community Involvement:</b> Enable communities to influence the decisions that affect their neighbourhoods and quality of life.</p>	<ul style="list-style-type: none"> <li>• Participation in local elections.</li> <li>• Participation in voluntary activity.</li> <li>• Access to councillors/MPs.</li> <li>• Access to the internet.</li> </ul>
	<p><b>23. Equality:</b> Ensure easy and equitable access to services, facilities and opportunities, including jobs and learning.</p>	<ul style="list-style-type: none"> <li>• Percentage of new residential development within 30mins public transport time of a GP, hospital, primary and secondary school, employment and a major shopping centre.</li> </ul>
	<p><b>24. Poverty:</b> Address poverty and disadvantage, taking into account the particular difficulties of those facing multiple disadvantage.</p>	<ul style="list-style-type: none"> <li>• Access to local services.</li> <li>• IMD score/rank.</li> <li>• Employment levels</li> <li>• Average earnings</li> </ul>
	<p><b>25. Health:</b> Improve health and reduce health inequalities by encouraging and enabling healthy active lifestyles and protecting health.</p>	<ul style="list-style-type: none"> <li>• Wards falling within the lowest 20% IMD Health Domain.</li> <li>• Access to health services.</li> <li>• Road safety.</li> </ul>
	<p><b>26. Crime:</b> Reduce crime, fear of crime and antisocial behaviour.</p>	<ul style="list-style-type: none"> <li>• Recorded crime levels.</li> <li>• Surveys on safety and fear of crime.</li> </ul>
	<p><b>28. Culture/Sport/Recreation:</b> Improve opportunities to participate in diverse cultural, sporting and recreational activities.</p>	<ul style="list-style-type: none"> <li>• Participation in sport.</li> <li>• Quantity and quality of sports facility provision.</li> <li>• Access to open space and sports facilities.</li> </ul>
8. Housing	<p><b>27. Housing:</b> Provide decent and affordable housing for all, of the right quantity, type, tenure and affordability to meet local needs.</p>	<ul style="list-style-type: none"> <li>• Housing completions.</li> <li>• Affordable housing as a proportion of completions.</li> <li>• Households classified as homeless.</li> <li>• Households in over-crowded dwellings</li> <li>• Quality of dwelling stock.</li> </ul>



## 7. Consultation and Next Steps

### 7.1 Consultation on the SA Report

This SA Report will be published for consultation alongside the Pre-Submission Birmingham Development Plan. Copies of the previous SA documents referred to in this SA Report can be found at: [www.birmingham.gov.uk/](http://www.birmingham.gov.uk/)

Comments on this SA Report should be sent to:

Strategic Planning  
Birmingham City Council  
1 Lancaster Circus  
Birmingham B1

[strategic.planning@birmingham.gov.uk](mailto:strategic.planning@birmingham.gov.uk)

Responses must be received by **XXXXXX**

### 7.2 Submission and Examination of the BDP

Following the end of the consultation on the BDP and the accompanying SA Report, any substantive changes made to the BDP will be appraised and a final SA Report will accompany the BDP to independent examination.

### 7.3 Finalising the SA Report and Post Adoption Statement

Following adoption of the BDP, a SA Post Adoption Statement will be produced, setting out the following:

- how environmental considerations have been integrated into the BDP;
- how the SA Report has been taken into account;
- how opinions expressed in relation to the BDP and SA Report have been taken into account;
- the reasons for choosing the BDP as adopted, in light of the reasonable alternatives considered; and
- the measures to be taken to monitor any significant environmental effects associated with implementation of the BDP.

### 7.4 Post Adoption

Following adoption of the BDP, there will need to be monitoring of any significant effects identified. This can take place alongside monitoring of the BDP and published as part of the Annual Monitoring Report.



## 7.5 Quality Assurance Checklist

SEA Directive requirement	Where covered in the SA Report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated.	This report and predecessors.
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes.	Section 2. 4 and Appendix A.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Sustainability issues facing the City (section 2.5 and baseline data set out in Appendix C).
c) The environmental characteristics of areas likely to be significantly affected.	Sustainability issues facing the (section 2.5 and baseline data set out in Appendix C).
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Sustainability issues facing the City (section 2.5 and baseline data set out in Appendix C).
e) The environmental protection objectives established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation.	Scoping Report (January 2008, July 2010, October 2012).
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects).	Analysis of significant effects (Table 3.1 and Appendix B).
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Appraisal of significant effects (section 3.2).
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Methodology (section 2). Background and previous reports (section 1 and section 4). Data limitations are identified in Appendix C.
i) A description of measures envisaged concerning monitoring in accordance with Art. 10.	Set out in section 6.2.
j) A non-technical summary of the information provided under the above headings.	Non-technical summary.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2).	This report.

# Appendix A

## Review of Plans, Policies and Programmes

Plan, Programme or Strategy	Objectives and Targets identified in the Document
<b>International</b>	
EU (1992) Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EEC, Habitats Directive).	The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures Member States are required to take account of economic, social and cultural requirements, as well as regional and local characteristics.
EU (1996) Ambient Air Quality Assessment and Management (96/62/EC, Air Quality Framework Directive).	<p>The Directive ensures that where pollutants exceed certain limit values, Member States take action to reduce pollution down to the limit values. The list of atmospheric pollutants to be considered includes: sulphur dioxide, nitrogen dioxide, particulate matter, lead, ozone, benzene, carbon monoxide, poly-aromatic hydrocarbons, cadmium, arsenic, nickel and mercury.</p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>• obtain adequate information on ambient air quality; and</li> <li>• maintain ambient air quality where it is good, and improve air quality where it is bad.</li> </ul>
EU (2000) Directive on Establishing a Framework for Community Action in the Field of Water Policy (2000/60/EC, The Water Framework Directive).	<p>The Directive establishes an integrated approach to protection, improvements and sustainable use of water bodies, introducing a statutory system of analysis and planning based upon the river basin.</p> <p>The Directive imposes a statutory responsibility on Member States to ensure all water bodies meet certain water quality standards. The four main stages of implementation are:</p> <ul style="list-style-type: none"> <li>• environmental and economic assessment ('Characterisation') of river basin districts including identification of pressures and impacts;</li> <li>• environmental monitoring based on river basin district characterisation;</li> <li>• setting of environmental objectives; and</li> <li>• designing and carrying out a programme of measures to achieve these environmental objectives.</li> </ul> <p>Targets:</p> <p>All water bodies in all Member States are to reach 'Good Ecological Status' by 2015. However, exactly what constitutes 'Good Ecological Status' has not yet been defined.</p>
EU (2001) Directive on Electricity Production from Renewable Energy Sources (2001/77/EC).	<p>The Directive obligates member states to establish a programme to increase the gross consumption of renewable energy based electricity by 2010. Member states are also required to produce a programme for increasing future consumption of renewable energy based electricity.</p> <p>The UK target is for renewables to account for 10% of UK consumption by 2010.</p>
EU (2005) Clean Air Strategy.	The strategy aims to extend clean air laws into new sectors - agriculture and transport - that were not covered before, targeting five main pollutants including fine-dust particles which are most harmful to human health.
EU (2008) Directive on Waste (2006/12/EC, Waste Framework Directive).	The directive requires all Member States to take the necessary measures to ensure waste is recovered or disposed of without endangering human health or causing harm to the environment and includes permitting, registration and inspection requirements. The directive also requires Member States to take appropriate measures to encourage firstly, the prevention or reduction of waste production and its harmfulness and secondly the recovery of waste by means of recycling, re-use or reclamation or any other process with a view to extracting secondary raw materials, or the use of waste as a source of energy. The directive's overarching requirements are supplemented by other directives for specific waste streams.
UNFCCC (1997) Kyoto Protocol to the UN Framework Convention on Climate Change.	The protocol shares the Convention's objective (to achieve stabilisation of greenhouse gas concentrations in the atmosphere at safe levels, so that ecosystems can adapt naturally, and food supply is not threatened) but strengthens the convention by committing Countries to legally-binding targets to limit or reduce their greenhouse gas emissions.

Plan, Programme or Strategy	Objectives and Targets identified in the Document
UNFCCC (2009) Copenhagen Accord (Climate Change).	<p>The Copenhagen Accord is a treaty that is to take over from the Kyoto Protocol's targets, as of when it expires in 2012, for curbing the growth in greenhouse gas emissions sufficiently to avoid climate change impacts projected by the IPCC. The Copenhagen Accord commits Countries to legally binding targets including:</p> <ul style="list-style-type: none"> <li>to reduce global emissions so as to hold the increase in global temperature below 2C;</li> <li>commit developed countries to reducing greenhouse gas emissions;</li> <li>projects to reduce greenhouse gas emissions in developing countries will be subject to international monitoring if they are internationally funded;</li> <li>provide developing countries with financial incentives to preserve forests; and</li> <li>implementation of the Accord to be reviewed in 2015 and an assessment to be made on whether the goal of keeping global temperature rise within 2C needs to be strengthened to 1.5C.</li> </ul>
Council of Europe (2006) European Landscape Convention	<p>Aims to promote the protection, management and planning of Europe's landscapes, both rural and urban, and to foster European co-operation on landscape issues.</p>
Council of Europe (1985) Convention on the Protection of the Architectural Heritage of Europe	<p>This convention commits signatories to protect their architectural heritage by means of identifying monuments, buildings and sites to be protected; preventing the disfigurement, dilapidation or demolition of protected properties; providing financial support by the public authorities for maintaining and restoring the architectural heritage on its territory; and supporting scientific research for identifying and analysing the harmful effects of pollution and for defining ways and means to reduce or eradicate these effects.</p>
EU (1991) Urban Waste Water Treatment Directive.	<p>The Directive aims to protect the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors and concerns the collection, treatment and discharge of:</p> <ul style="list-style-type: none"> <li>Domestic Waste Water;</li> <li>Mixture of Waste Water; and</li> <li>Waste Water from Certain Industrial Sectors.</li> </ul> <p>There are four main principles: planning, regulation, monitoring, and information and reporting.</p>
European Commission (1999) The Landfill Directive.	<p>The Directive aims to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste, during the whole lifecycle of the landfill.</p>
EC (2007) Together for Health: A Strategic Approach for the EU 2008-2013	<p>The Strategy aims to provide an overarching strategic framework spanning core issues in health as well as health in all policies and global health issues.</p>
The Pan-European Biological and Landscape Diversity Strategy (1995)	<p>The strategy aims to address degradation of biological and landscape diversity across Europe reinstating these assets where possible.</p>
<b>National</b>	
CLG (2005) Planning Policy Statement 10: Planning for Sustainable Waste Management.	<p>The overall objective of the policy is to provide sustainable development by protecting the environment and human health by producing less waste and by using it as a resource wherever possible.</p>
CLG (2010) Five-year housing land supply coverage in England	<p>Summarising Local Planning Authorities' reported assessment of the '5 year land supply' for housing. The statistics include:</p> <ul style="list-style-type: none"> <li>the number of and proportion of authorities which reported having identified at least a sufficient supply of sites for the housing requirements for 5 years from April 2009; and</li> <li>each local planning authority's reported proportion of the '5 year housing requirements' that can be accommodated on available, suitable and achievable sites.</li> </ul>

Plan, Programme or Strategy	Objectives and Targets identified in the Document
CLG (2012) National Planning Policy Framework (NPPF)	<p>The general thrust of the NPPF is aimed at contributing towards sustainable development through the planning system. There is a presumption in favour of sustainable development “<i>which should be seen as a golden thread running through both plan-making and decision-taking.</i>” There are three dimensions as to how the government aims to achieve sustainable development which gives rise to the need for the planning system to perform in a number of roles. These roles are based around economic, environmental and social roles.</p>
NPPF – Biodiversity, Geodiversity & Soil	<p>The NPPF sets out 12 core planning principles for plan and decision making, including: ‘Conserving and enhancing the natural environment’. The planning system should contribute and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> <li>• protecting and enhancing valued landscapes, geological conservation interests and soils;</li> <li>• recognising the wider benefits of ecosystem services;</li> <li>• minimising impacts on biodiversity and providing net gains in biodiversity where possible, including by establishing coherent ecological networks that are more resilient to current and future pressures;</li> <li>• preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and</li> <li>• remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.</li> </ul> <p>Plans and decisions should encourage effective use of brownfield sites and take into account the economic benefits of agricultural land when assessing development, seeking to utilise areas of poorer quality land.</p> <p>Local planning authorities should plan positively for creation, protection, enhancement and management of networks of biodiversity and green infrastructure. Planning and decision making should occur at a landscape scale across local authority boundaries and assess noise, air and light pollution, considering cumulative impacts. Local planning authorities should protect and enhance biodiversity specifically regarding priority species/habitats, protected sites and potential/proposed/possible protected sites.</p>
NPPF – Landscape	<p>The NPPF sets out 12 core planning principles for plan and decision making, including: ‘Conserving and enhancing the natural environment’. The planning system should contribute and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> <li>• protecting and enhancing valued landscapes, geological conservation interests and soils;</li> <li>• recognising the wider benefits of ecosystem services;</li> <li>• minimising impacts on biodiversity and providing net gains in biodiversity where possible, including by establishing coherent ecological networks that are more resilient to current and future pressures;</li> <li>• preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and</li> <li>• remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.</li> </ul> <p>Plans and decisions should encourage effective use of brownfield sites and take into account the economic benefits of agricultural land when assessing development, seeking to utilise areas of poorer quality land.</p> <p>Local planning authorities should plan positively for creation, protection, enhancement and management of networks of biodiversity and green infrastructure. Planning and decision making should occur at a landscape scale across local authority boundaries and assess noise, air and light pollution, considering cumulative impacts. Local planning authorities should protect and enhance biodiversity specifically regarding priority species/habitats, protected sites and potential/proposed/possible protected sites.</p>
NPPF – Cultural Environment	<p>One of the NPPF’s 12 core planning principles for plan and decision making is the conservation and enhancement of the historic environment. Local planning authorities are required to set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional. Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets. Proposals that preserve the setting, reveal the significance of the asset or make a positive contribution should be treated favourably.</p>

Plan, Programme or Strategy	Objectives and Targets identified in the Document
NPPF – Water	<p>Among the NPPF's core principles are 'conserving and enhancing the natural environment' and 'meeting the challenge of climate change, flooding and coastal change'; In fulfilling these objectives, the planning system should contribute to and enhance the natural and local environment by: preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.</p> <p>In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment.</p> <p>Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations.</p> <p>Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. Local Plans should be supported by Strategic Flood Risk Assessment and develop policies to manage flood risk from all sources, taking account of advice from the Environment Agency and other relevant flood risk management bodies, such as lead local flood authorities and internal drainage boards. Local Plans should apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change, by:</p> <ul style="list-style-type: none"> <li>• applying the Sequential Test;</li> <li>• if necessary, applying the Exception Test;</li> <li>• safeguarding land from development that is required for current and future flood management;</li> <li>• using opportunities offered by new development to reduce the causes and impacts of flooding; and</li> <li>• where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to facilitate the relocation of development, including housing, to more sustainable locations.</li> </ul>
NPPF – Climate Change	<p>One of the core principles of the NPPF is meeting the challenge of climate change, flooding and coastal change and encourages the adoption of proactive strategies to mitigate and adapt to climate change in line with the objectives and provisions of the Climate Change Act 2008, taking full consideration of flood risk, coastal change and water supply and demand. The NPPF also supports low carbon future by helping to increase the use of renewable and low carbon sources in line with the National Policy Statement for Renewable Energy Infrastructure. It seeks to ensure that all types of flood risk is taken into account over the long term at the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas of highest risk.</p>
NPPF – Air Quality	<p>This Directive aims to improve air quality throughout Europe by controlling the level of certain pollutants and monitoring their concentrations. In particular the Directive aims to establish levels for different air pollutants; draw up common methods for assessing air quality; methods to improve air quality; and make sure that information on air quality is easily accessible to Member States and the public.</p>
NPPF – Minerals and Waste	<p>One of the core principles of the NPPF is facilitating the sustainable use of minerals. Policy guidance suggests the need to: Identify policies for existing and new sites of national importance, the definition of Mineral Safeguarding Areas so that locations of mineral sources are not sterilised by other developments, safeguarding of existing and planned mineral infrastructure (rail links, wharfage, storage, processing etc.), environmental criteria to ensure there is not an unacceptable environmental impact and policies for reclaiming land and site aftercare.</p>
NPPF – Economy	<p>One of the NPPF's core planning principles for plan and decision making is building a strong competitive economy. The NPPF highlights the Government's commitment to securing economic growth to create jobs and prosperity, ensuring the planning system does everything it can to support sustainable economic growth. Local planning authorities are required to proactively meet development needs recognising potential barriers to invest (including infrastructure, housing and services) and regularly review land allocations. Economic growth in rural areas should be supported to create jobs and sustainable new developments, including expansion of all types of businesses, diversification of agriculture, supporting tourism and retention of local services.</p> <p>In drawing up local plans, local authorities should:</p> <ul style="list-style-type: none"> <li>• set out a clear economic vision and strategy for their area which positively and proactively encourages sustainable economic growth;</li> <li>• set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;</li> </ul>

Plan, Programme or Strategy	Objectives and Targets identified in the Document
	<ul style="list-style-type: none"> <li>• support existing business sectors, taking account of whether they are expanding or contracting and, where possible, identify and plan for new or emerging sectors likely to locate in their area. Policies should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances;</li> <li>• plan positively for the location, promotion and expansion of clusters or networks of knowledge driven, creative or high technology industries;</li> <li>• identify priority areas for economic regeneration, infrastructure provision and environmental enhancement; and</li> <li>• facilitate flexible working practices such as the integration of residential and commercial uses within the same unit.</li> </ul>
NPPF – Housing	<p>Two of the NPPF's core principles is the delivery of a wide choice of high quality homes and requiring good design. Local planning authorities are required to significantly boost the supply of housing through:</p> <ul style="list-style-type: none"> <li>• affordable and meeting needs of the market, identifying accessible sites for 5, 6-10 and 11-15 years worth of housing/growth;</li> <li>• illustrating the expected rate of housing delivery through a housing trajectory and set out a strategy;</li> <li>• deliver high quality housing, widen opportunities for home ownership and create sustainable inclusive and mixed communities;</li> <li>• making allowance for windfall sites on the basis that such sites are consistently available;</li> <li>• resisting inappropriate development of residential gardens; and</li> <li>• avoid isolated country homes unless they were truly outstanding or innovative in design or enhance the surroundings.</li> </ul> <p>Sustainable development in rural areas housing should be located where it will enhance or maintain the vitality of rural communities.</p> <p>Planning policies and decisions should aim to ensure that developments:</p> <ul style="list-style-type: none"> <li>• will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;</li> <li>• establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit;</li> <li>• optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including incorporation of green and other public space as part of developments) and support local facilities and transport networks;</li> <li>• respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation;</li> <li>• create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion; and</li> <li>• are visually attractive as a result of good architecture and appropriate landscaping.</li> </ul>
NPPF - Health	<p>Amongst the planning principles of the NPPF is the promotion of healthy communities. The framework sets out open space, sport and recreation considerations for neighbourhood planning bodies which include an assessment of needs and opportunities; setting local standards; maintaining an adequate supply of open space and sports and recreational facilities; planning for new open space and sports and recreational facilities; and planning obligations. Local and neighbourhood plans should identify community green spaces of particular importance (including recreational and tranquillity) to them, ensuring any development of these areas is ruled out in a majority of circumstances.</p>
NPPF – Transport & Accessibility	<p>Amongst the 12 planning principles of the NPPF are:</p> <ul style="list-style-type: none"> <li>• promoting sustainable transport; Support sustainable transport development including infrastructure, large scale facilities, rail freight, roadside facilities, ports and airports.</li> <li>• Protecting and exploiting opportunities for sustainable transport modes, including designing and locating developments to maximise sustainable modes and minimise day to day journey lengths.</li> </ul>



Plan, Programme or Strategy	Objectives and Targets identified in the Document
NPPF – Quality of Life	<ul style="list-style-type: none"> <li>• One of the 12 core planning principles of the NPPF is: Promoting healthy communities, and Supporting high quality communications infrastructure. The NPPF argues that the planning system can play an important role in facilitating social interaction and creating healthy, inclusive communities. Local planning authorities should create a shared vision with communities of the residential environment and facilities they wish to see. Local policies and decisions should therefore promote: Safe and accessible environments and developments.</li> <li>• Opportunities for members of the community to mix and meet.</li> <li>• Plan for development and use of high quality shared public space.</li> <li>• Guard against loss of facilities.</li> <li>• Ensure established shops can develop in a sustainable way.</li> <li>• Ensure integrated approach to housing and community facilities and services.</li> </ul> <p>Local and neighbourhood plans should identify community green spaces of particular importance (including recreational and tranquillity) to them, ensuring any development of these areas is ruled out in a majority of circumstances.</p> <p>The framework sets out open space, sport and recreation considerations for neighbourhood planning bodies. These include an assessment of needs and opportunities; setting local standards; maintaining an adequate supply of open space and sports and recreational facilities; planning for new open space and sports and recreational facilities; and planning obligations.</p>
CLG (2011) The Localism Act	<p>The Localism Act includes five key measures that underpin the Government's approach to decentralisation.</p> <ul style="list-style-type: none"> <li>• community rights;</li> <li>• neighbourhood planning;</li> <li>• housing;</li> <li>• general power of competence; and</li> <li>• empowering cities and other local areas.</li> </ul>
CLG (2011) The Community Infrastructure Levy Regulations	<p>The Community Infrastructure Levy is a new levy that local authorities in England and Wales can choose to charge on new developments in their area. The money can be used to support development by funding infrastructure that the council, local community and neighbourhoods want - for example new or safer road schemes, park improvements or a new health centre. The system applies to most new buildings and charges are based on the size and type of the new development.</p>
DECC (2008) UK Climate Change Act 2008.	<p>The 2008 Climate Change Act seeks to manage and respond to climate change in the UK, by:</p> <ul style="list-style-type: none"> <li>• setting ambitious, legally binding targets;</li> <li>• taking powers to help meet those targets;</li> <li>• strengthening the institutional framework;</li> <li>• enhancing the UK's ability to adapt to the impact of climate change; and</li> <li>• establishing clear and regular accountability to the UK Parliament and to the devolved legislatures.</li> </ul>
DECC (2009) UK Renewable Energy Strategy 2009.	<p>The UK has committed to sourcing 15% of its energy from renewable sources by 2020 – an increase in the share of renewables from about 2.25% in 2008. The Renewable Energy Strategy sets out how the Government will achieve this target through utilising a variety of mechanisms to encourage Renewable Energy provision in the UK. This includes through streamlining the planning system, increasing investment in technologies and improving funding for advice and awareness raising.</p>
DCMS (2007) Heritage Protection for the 21 <sup>st</sup> Century.	<p>This White Paper responds to the public call for change, and to this changing policy context. It sets out a vision for a new heritage protection system. The proposals in the White Paper reflect the importance of the heritage protection system in preserving heritage for people to enjoy now and in the future. They are based around three core principles:</p> <ul style="list-style-type: none"> <li>• developing a unified approach to the historic environment;</li> <li>• maximising opportunities for inclusion and involvement; and</li> <li>• supporting sustainable communities by putting the historic environment at the heart of an effective planning system.</li> </ul>



Plan, Programme or Strategy	Objectives and Targets identified in the Document
Defra (2002) Working with the Grain of Nature: A Biodiversity Strategy for England.	Sets out the basis for biodiversity enhancement across the country.
Defra (2003) The Water Environment (Water Framework Directive) (England and Wales) Regulations	Requires all inland and coastal waters to reach 'good status' by 2015. This is being done by establishing a river basin structure with ecological targets for surface waters.
Defra (2007) Guidance for Local Authorities on Implementing Biodiversity Duty	The Duty is set out in Section 40 of the Natural Environment and Rural Communities Act (NERC) 2006, and states that: " <i>Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity</i> ". Particular areas of focus include: Policy, Strategy and Procurement; Management of Public Land and Buildings; Planning, Infrastructure and Development; and Education, Advice and Awareness.
Defra (2007) Conserving Biodiversity: The UK Approach (The UK Biodiversity Action Plan)	The UK Biodiversity Action Plan (UK BAP) is the UK Government's response to the Convention on Biological Diversity (1992). The CBD called for the development and enforcement of national strategies and associated action plans to identify, conserve and protect existing biological diversity, and to enhance it wherever possible. Priority species and habitats are those that have been identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP).
Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 2).	The Strategy sets out standards and objectives for the eight main health-threatening air pollutants in the UK. The standards are based on an assessment of the effects of each pollutant on public health. They are based on recommendations by the Expert Panel on Air Quality Standards, The European Union Air Quality Daughter Directive and the World Health Organisation. Local Authorities are responsible for seven of the eight air pollutants under Local Air Quality Management (LAQM). National objectives have also been set for the eighth pollutant, ozone, as well as for nitrogen oxides and sulphur dioxide.
Defra (2007) Waste Strategy for England 2007.	<p>The Waste Strategy aims to increase diversion of waste from landfill, and to reduce the production of waste by making products with fewer natural resources.</p> <p>Targets:</p> <ul style="list-style-type: none"> <li>• reduce amount of household waste not re-used, recycled or composted from over 22.2 million tonnes in 2000 by 29% to 15.8 million tonnes in 2010, with an aspiration to reduce to 12.2 million tonnes in 2020;</li> <li>• recycling and composting 40% of household waste by 2010, 45% by 2015 and 50% by 2020; and</li> <li>• recover 53% of municipal waste by 2010, 67% by 2015 and 75% by 2020.</li> </ul>
Defra (2008) Future Water, the Government's Water Strategy for England (Feb 08).	<p>Objectives - by 2030 at the latest, we have:</p> <ul style="list-style-type: none"> <li>• improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from our taps;</li> <li>• sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water;</li> <li>• ensured a sustainable use of water resources, and implemented fair, affordable and cost reflective water charges;</li> <li>• cut greenhouse gas emissions; and</li> <li>• embedded continuous adaptation to climate change and other pressures across the water industry and water users.</li> </ul> <p>Targets: Key targets are within the objectives above &amp; further a number of sub-targets are included within the document.</p>
Defra (2009) Safeguarding our Soils: A Strategy for England	<p>The Soil Strategy for England provides a vision to guide future policy development across a range of areas and sets out the practical steps that are needed to take to prevent further degradation of our soils, enhance, restore and ensure their resilience, and improve understanding of the threats to soil and best practice in responding to them. Key objectives of the strategy include:</p> <ul style="list-style-type: none"> <li>• better protection for agricultural soils;</li> <li>• protecting and enhancing stores of soil carbon;</li> </ul>

Plan, Programme or Strategy	Objectives and Targets identified in the Document
	<ul style="list-style-type: none"> <li>• building the resilience of soils to a changing climate;</li> <li>• preventing soil pollution;</li> <li>• effective soil protection during construction and development; and</li> <li>• dealing with the legacy of contaminated land.</li> </ul>
<p>Defra (2011) Natural Environment White Paper; The natural choice: securing the value of nature</p>	<p>The Natural Environment White paper sets out the Government's plans to ensure the natural environment is protected and fully integrated into society and economic growth. The White Paper sets out four key aims:</p> <ul style="list-style-type: none"> <li>(i) protecting and improving our natural environment;</li> <li>(ii) growing a green economy;</li> <li>(iii) reconnecting people and nature; and</li> <li>(iv) international and EU leadership, specifically to achieve environmentally and socially sustainable economic growth, together with food, water, climate and energy security and to put the EU on a path towards environmentally sustainable, low-carbon and resource-efficient growth, which is resilient to climate change, provides jobs and supports the wellbeing of citizens.</li> </ul>
<p>Defra (2011) Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services</p>	<p>The Strategy is designed to help to deliver the Natural Environment White Paper and include the following priorities:</p> <ul style="list-style-type: none"> <li>• creating 200,000 hectares of new wildlife habitats by 2020;</li> <li>• securing 50% of SSSIs in favourable condition, while maintaining at least 95% in favourable or recovering condition;</li> <li>• encouraging more people to get involved in conservation by supporting wildlife gardening and outdoor learning programmes; and</li> <li>• introducing a new designation for local green spaces to enable communities to protect places that are important to them</li> </ul>
<p>Defra &amp; HM Government (2011) Water White Paper; Water for Life</p>	<p>Water for Life describes a vision for future water management in which the water sector is resilient, in which water companies are more efficient and customer focused, and in which water is valued as the precious and finite resource it is.</p>
<p>DTI Micro Generation Strategy (2006)</p>	<p>Acknowledges that local authorities can be pro-active in promoting small-scale, local renewable energy generation schemes through "sensible use of planning policies".</p>
<p>HM Government (2010) The Air Quality Standards 2010</p>	<p>The Regulations largely implement Directive 2008/50/EC on ambient air quality and cleaner air for Europe.</p>
<p>HM Government (2012) Draft Water Bill</p>	<p>The provisions in the Bill will enable the delivery of Government's aims for a sustainable sector as set out in the Water White Paper in a way that this is workable and clear. This Bill aims to makes steps towards reducing regulatory burdens, promoting innovation and investment, giving choice and better service to customers and enabling more efficient use of scarce water resources.</p>
<p>DfT (2008) Delivering a Sustainable Transport System (DaSTS).</p>	<p>Objectives:</p> <ul style="list-style-type: none"> <li>• to support national economic competitiveness and growth, by delivering reliable and efficient transport networks;</li> <li>• to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;</li> <li>• to contribute to better safety and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;</li> <li>• to promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and</li> <li>• to improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.</li> </ul>

Plan, Programme or Strategy	Objectives and Targets identified in the Document
English Heritage (2008) Conservation Principles, Policies and Guidance	<p>A framework for the sustainable management of the historic environment based on the following principles:</p> <ul style="list-style-type: none"> <li>• the historic environment is a shared resource;</li> <li>• everyone should be able to participate in sustaining the historic environment;</li> <li>• understanding the significance of places is vital;</li> <li>• significant places should be managed to sustain their values;</li> <li>• decisions about change must be reasonable, transparent and consistent; and</li> <li>• documenting and learning from decisions is essential.</li> </ul>
English Nature: Climate Change Space for Nature (2006)	Context for the next 80 years in terms of the likely effects of climate change on biodiversity. Prescribes suggested actions to be taken in preparation for change.
Environment Agency (2009) Water for people and the environment - Water resources strategy for England and Wales.	<p>Objectives:</p> <ul style="list-style-type: none"> <li>• enable habitats and species to adapt better to climate change;</li> <li>• allow the way we protect the water environment to adjust flexibly to a changing climate;</li> <li>• reduce pressure on the environment caused by water taken for human use;</li> <li>• encourage options resilient to climate change to be chosen in the face of uncertainty;</li> <li>• better protect vital water supply infrastructure;</li> <li>• reduce greenhouse gas emissions from people using water, considering the whole life-cycle of use; and</li> <li>• improve understanding of the risks and uncertainties of climate change.</li> </ul> <p>Target: In England, the average amount of water used per person in the home is reduced to 130 litres each day by 2030.</p>
Forestry Commission (2005): Trees and Woodlands Nature's Health Service	An advisory document which provides detailed examples of how the Woodland Sector (trees, woodlands and green spaces) can significantly contribute to people's health, well-being (physical, psychological and social) and quality of life. Increasing levels of physical activity is a particular priority.
HM Government (2006) Climate Change The UK Programme	<p>The Climate Change Programme aims to tackle climate change by setting out policies and priorities for action in the UK and internationally.</p> <p>Aims and Objectives:</p> <ul style="list-style-type: none"> <li>• to reduce carbon dioxide emissions by 20% below 1990 levels by 2010 (more than is required by the Kyoto Agreement);</li> <li>• make agreements with other countries as to how they will tackle climate change together;</li> <li>• report annually to Parliament on UK emissions, future plans and progress on domestic climate change; and</li> <li>• set out the adaptation plan for the UK, informed by additional research on the impacts of climate change.</li> </ul>
HM Government (2009) Low Carbon Transition Plan: National Strategy for Climate and Energy.	<p>The UK Low Carbon Transition Plan sets out how the UK will meet the Climate Change Act's legally binding target of 34 percent cut in emissions on 1990 levels by 2020. It also seeks to deliver emissions cuts of 18% on 2008 levels. The main aims of the Transition Plan include the following:</p> <ul style="list-style-type: none"> <li>• producing 30% of energy from renewables by 2020;</li> <li>• improving the energy efficiency of existing housing;</li> <li>• increasing the number of people in 'green jobs'; and</li> <li>• supporting the use and development of clean technologies.</li> </ul>
HM Government (2010) The Conservation of Habitats and	This is the UK transposition of EC Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora. The Regulations provide for the designation and protection of 'European sites', the protection of

Plan, Programme or Strategy	Objectives and Targets identified in the Document
Species Regulations 2010	'European protected species', and the adaptation of planning and other controls for the protection of European Sites.
<b>Regional</b>	
Severn Trent Water Resources Management Plan (2010)	Guidance on the approach to water management over the period 2010-2035, focused on achieving and maintaining the level of headroom necessary to ensure we can deliver our target levels of service at least cost to customers, whilst minimizing the impact on the environment. This is to be achieved in part by reducing leakage and managing the demand for water, and partly by developing new resources. The Strategy identifies that: <i>"Our best estimates of future supply/demand pressures show that we will need additional water resources and treatment capacity in the longer term. The schemes being delivered through our wider supply resilience investment strategy will provide a deployable output benefit and these form a key part of our longer term supply / demand plans. However, we have identified the likely need for further leakage reductions and water resource schemes during in the 2025-2035 period. Our analysis shows that the most significant risk to our long term supply/demand balance is the impact of climate change."</i>
Sustainability West Midlands (2011) Local Authority Low Carbon Economy Programme	The West Midlands Local Authority Low Carbon Economy Programme has aimed to help West Midlands authorities use the low carbon agenda to achieve cost reduction and private and third sector low carbon job creation.
The Greater Birmingham and Solihull Local Enterprise Partnership (2010)	<p>The Greater Birmingham &amp; Solihull LEP is a partnership of businesses, local authorities and universities which supports private sector growth and job creation. Set up to strengthen local economies, encourage economic development and enterprise, and improve skills across the region. The LEP has set out plans to:</p> <ul style="list-style-type: none"> <li>• increase economic output (GVA) in the area by £8.25 billion by 2020;</li> <li>• create 100,000 private sector jobs by 2020;</li> <li>• stimulate growth in the business stock and business profitability;</li> <li>• boost indigenous and inward investment;</li> <li>• become global leaders in key sectors, including: automotive assembly, low carbon R&amp;D, business and professional services, clinical trials, creative and digital sectors; and</li> <li>• increase the proportion of adults with appropriate qualifications to meet employment needs.</li> </ul>
<b>Local</b>	
Birmingham City Council (2012) Aston, Newtown and Lozells Area Action Plan	To provide a clear vision and strategy for regeneration and development in the Aston, Newtown and Lozells area over the period 2012-2026. The AAP sets out a comprehensive and co-ordinated approach to shaping housing, employment, local centres, community facilities, infrastructure, transport and the environment.
Birmingham City Council & Bromsgrove District Council(2009) Longbridge Area Action Plan	Longbridge will undergo major transformational change redeveloping the former car plant and surrounding area into an exemplar sustainable, employment led mixed use development for the benefit of the local community, Birmingham, Bromsgrove, the region and beyond. It will deliver new jobs, houses, community, leisure and educational facilities as well as providing an identifiable and accessible new heart for the area. All development will embody the principles of sustainability, sustainable communities and inclusiveness. At the heart of the vision is a commitment to high quality design that can create a real sense of place with a strong identity and distinctive character. All of this will make it a place where people will want to live, work, visit and invest and which provides a secure and positive future for local people.
Birmingham City Council (1997) Nature Conservation Strategy for Birmingham	SPG promoting the conservation and enhancement of nature conservation across the City.
Birmingham City Council (1999) Regeneration Through Conservation: Birmingham Conservation Strategy.	A strategy for the protection and enhancement of Birmingham's cultural heritage.
Birmingham City Council (2001) Affordable Housing SPD	The Affordable Housing SPG was prepared to help encourage different types of housing on new housing developments in the city, to suit all needs. This document provides both detailed affordable housing policies and practical information to help developers when preparing planning applications for such schemes.

Plan, Programme or Strategy	Objectives and Targets identified in the Document
Birmingham City Council (2004) Archaeology Strategy.	The Strategy explains the process when proposed new development is likely to affect archaeological remains. It stresses the importance of early consultation about the archaeological implications of a proposed development and the process of assessment and evaluation to inform decision, making on requirements for preservation or recording of archaeological remains.
Birmingham City Council (2005) Developing Birmingham: An Economic Strategy for the City 2005-2015.	<p>The vision of the Economic Strategy is: "To build on Birmingham's renaissance and secure a strong and sustainable economy for our people."</p> <p>The strategy identifies four key areas to focus on:</p> <ol style="list-style-type: none"> <li>1) development and Investment;</li> <li>2) creating a skilled workforce;</li> <li>3) fostering business development and diversification; and</li> <li>4) creating sustainable communities and vibrant urban villages.</li> </ol>
Birmingham City Council (2006) Access for People with Disabilities SPD	The Access for People with Disabilities document provides guidance about how to make new developments accessible to all. Specific groups of people may find it particularly helpful to have more accessible public buildings, such as the elderly, those with children and buggies, and people with learning or language difficulties, as well as those with sensory or mobility impairments
Birmingham City Council (2006) Air Quality Action Plan.	<p>The Action Plan sets out 41 actions which follow the objectives below:</p> <ul style="list-style-type: none"> <li>• reducing vehicle emissions;</li> <li>• improving public transport to reduce traffic volumes;</li> <li>• improving the road network to reduce congestion;</li> <li>• using area planning measures to reduce traffic volumes;</li> <li>• reducing air pollution from industry, commerce and residential areas; and</li> <li>• changing levels of travel demand/promotion of alternative modes of transport.</li> </ul>
Birmingham City Council (2006) Municipal Waste Management Strategy.	<p>The Strategy sets out the following vision for delivering its municipal waste management services:</p> <p><i>"To run a city that produces the minimum amount of waste that is practicable, and where the remainder is re-used, recycled or recovered to generate energy. The material recovered through composting, recycling, re-use and from the energy recovery process will replace the need for extraction of virgin materials.</i></p> <p><i>The waste management strategy will be sensitive to local needs and will provide a service to help Birmingham become as clean and green a city as it can be. Birmingham City Council and the Constituency partners will provide a service that citizens are pleased to support, and where there is malpractice or deliberate misuse of the service, that this is dealt with efficiently to maintain a clean, safe and healthy environment."</i></p> <p>The Strategy has the following objectives:</p> <ul style="list-style-type: none"> <li>• the Council will explore ways of reducing the amount of waste sent to landfill to an absolute minimum, recovering value from waste wherever economically and environmentally practicable through energy recovery and measures to increase re-use, recycling and composting;</li> <li>• the City Council and its partners will raise awareness among the wider community to view waste as a resource and will deliver communications activities and work with relevant stakeholders (such as community groups and schools) to promote the cultural change needed to significantly increase recycling and re-use and reduce the overall quantity of waste requiring treatment or disposal;</li> <li>• the City Council will develop recycling and composting system that meet the targets set out in this strategy through methods that are acceptable and accessible to the residents of Birmingham;</li> <li>• the City Council will explore ways of working with other local authorities and will expand its partnership activities with the private voluntary sectors to assist in delivery of this strategy; and</li> <li>• the City Council will work with its partners and other agencies to provide efficient and effective enforcement of its services to contribute to a clean, green, safe and healthy environment.</li> </ul>
Birmingham City Council (2010) The Birmingham Area Investment Prospectus.	The purpose of the Area Investment Prospectus (AIP) is to capture the key strategic development and investment opportunities around the city as well as outline Birmingham's plans to improve the economic environment and infrastructure required to support the growth generated by these opportunities. The AIP brings together the visions of public and private partners into one overall framework, designed to continue the

Plan, Programme or Strategy	Objectives and Targets identified in the Document
	transformation of Birmingham, and enhance its place as a leading world city and a dynamic regional capital.
Birmingham City Council (2008) Birmingham Private Sector Housing Strategy 2008+ (updated 2010).	The strategy details priority issues and actions to increase levels of decent homes in owner-occupied and private rented sector housing; promote domestic energy efficiency and affordable warmth; and address the growing demand from elderly and disabled residents for assistance to live independently in their own homes. It also set out how the council will fulfil its regulatory role in the licensing and inspection of Houses in Multiple Occupation (HMOs) as prescribed by the Housing Act (2004) and promote better standards of management within the private rented sector (PRS).
Birmingham City Council (2008) Contaminated Land Inspection Strategy for Birmingham Second Edition	<p>To identify any contaminated land as defined by the legislation.</p> <p>To take steps to control any risk from any contaminated land identified using voluntary or enforcement action.</p> <p>To liaise with the Environment Agency regarding sites that may be polluting controlled waters or other special sites.</p>
Birmingham City Council (2010) Statement of Community Involvement	The Statement of Community Involvement (SCI) sets out how we will encourage more people to get involved in the planning decision-making process in Birmingham.
Birmingham City Council (2010) Birmingham Climate change action plan 2010+	<p>Birmingham becoming a Low Carbon Transition city</p> <p>Improving the energy efficiency of the city's Homes and Building</p> <p>Reducing the city's reliance on unsustainable energy through Low Carbon Energy Generation</p> <p>Reducing the city's impact on the non-renewable resources through Resource Management</p> <p>Reducing the environmental impact of the city's mobility needs through Low Carbon Transport</p> <p>Making sure the city is prepared for climate change through Climate Change Adaptation</p> <p>Making sure that this action plan Engages with Birmingham Citizens and Businesses</p>
Birmingham City Council (2011) Birmingham Big City Plan City Centre Masterplan	<p>Six broad objectives will guide the transformation of the city centre.</p> <p>Liveable city - provides a high quality of living, creating places for people that offer a diverse mix of activities and spaces within an accessible, safe, resilient and attractive environment.</p> <p>Connected city - is safe and convenient for pedestrians and cyclists to move around and has an effective and attractive public transport system with an efficient highway network.</p> <p>Authentic city - offers a unique and diverse experience through its architecture, its streets and spaces, its arts and culture, its businesses and its neighbourhoods.</p> <p>Knowledge city - utilises and supports its universities, colleges, businesses and people to create a strong and sustainable economy.</p> <p>Creative city - values and supports creativity and industry in all its forms.</p> <p>Smart city - responds to the challenge of climate change through sustainable growth, pioneering the low carbon future.</p>
Birmingham City Council (Jan 2012) Level 1 & 2 Strategic Flood Risk Assessment	Assesses and maps all known sources of flood risk, including fluvial, surface water, sewer, groundwater and impounded water bodies, taking into account future climate change predictions, to allow the Council to use this as an evidence base to locate future development primarily in low flood risk areas. The outputs from the SFRA will also assist in preparing sustainable policies for the long term management of flood risk.
Birmingham City Council (2012) Places for the Future SPD	<p>Sets out how the planning process will ensure sustainable development and what is required of developers throughout the planning process, including the submission of Sustainability Statements, Design and Access Statements and Carbon Budget Statements, and offers guidance for developers on how to plan and deliver sustainable developments to comply with the Council's policies and standards on sustainability. The SPD's objectives are to:</p> <ul style="list-style-type: none"> <li>• set out how national and strategic policy will be interpreted in detail in Birmingham's Development</li> <li>• identify the elements of sustainable development which all future developments must consider</li> <li>• provide detailed guidance on these elements</li> <li>• ensure the City meets its agreed carbon reduction targets</li> <li>• ensure that the City adapts to future climate change</li> <li>• ensure that the City's overall natural environment, biodiversity, ecology and historical heritage are</li> </ul>



**Plan, Programme or Strategy**
**Objectives and Targets identified in the Document**

nurtured and maintained

Birmingham City Council  
(2013) Birmingham's Green  
Living Spaces Plan

Establishes a framework for action City-wide through the integration of seven principles:

- climate change adaptation;
- watercourse management;
- health improvement;
- tree and woodland management
- greenway definition and enhancement;
- eco-system management; and
- Green Living Spaces creation.

Birmingham City Council  
(2013) Birmingham Health and  
Well-being Strategy

Identifies priorities and delivery mechanisms for addressing acute and chronic health and well-being issues across the City, some elements of which are closely related to spatial planning. These include aspirations to:

- create fair employment and good work for all;
- ensure Healthy Standard of living for all; and
- create and develop healthy sustainable homes and communities.





## Appendix B

# Appraisal of the Policies of the BDP

### Appraisal Scoring Key

<b>++</b>	Major Positive Impact	<b>+</b>	Positive Impact	<b>0</b>	Neutral Impact	<b>-</b>	Negative Impact	<b>--</b>	Major Negative Impact	<b>#</b>	No Relationship	<b>?</b>	Uncertain Relationship
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PG1: Overall Levels of Growth																													
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing								
SA Objective	1. Resource Use	7. Waste Reduction & Min.	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Resp.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	-	-	+	+	+	+	+	+	0	+	+	+	+	0	?	#	0	+	+	+	+	+	+	+	+	+	0	++	++?

**Commentary:** The levels of growth which are sought to be accommodated reflect the outcome of a complex and long-running set of factors. As such, providing for housing and employment needs is necessary and prudent and the strategy of regeneration first, providing houses and jobs together represents a coherent approach to addressing the challenges faced by the City. Whilst there are potential pressures on the environment in achieving the predicted levels of growth (such as increased air pollution) which will require close monitoring, there are also significant opportunities for environmental enhancement as part of regeneration and addressing issues of social exclusion across the City's most deprived areas. There are strong links to all of the delivery policies (TP1-35) as well as PG3: Place Making. With regard to PG3, reference in the policy to the role of regeneration and the creation of sustainable neighbourhoods would be a useful addition.

In light of fulfilling the demands of the NPPF for sustainable development, one area of particular uncertainty is the extent to which, through the Duty to Co-operate, the City's development requirements can be met. The BDP proposes that around 30,000 dwellings will be provided in adjacent areas, seeking to reflect the interrelationship between the City of Birmingham and its surrounding city-region as evidenced through patterns of commuting, strategic employment and provision of retail and cultural services. There are significant uncertainties over the likely sustainability implications of accommodating around 30,000 dwellings in surrounding authorities, given the absence of detail at this stage of where this portion of Birmingham's housing need might go.

**Likelihood/Certainty:** Where implemented, likely to be realised, both positively and negatively, but uncertainties over the extent of implementation.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

**PG2: Birmingham as an International City**

SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing
SA Objective	1. Resource Use 7. Waste Reduction & Min. 8. Efficient use of land	2. Sustainable Design 3. Renewable Energy 4. Energy Efficiency 5. Sustainable Transport 6. Reduce the need to travel 9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env. 13. Natural Landscape 14. Biodiversity	15. Air Quality 16. Water Quality 17. Soil Quality	18. Noise 20. Economy and Equality 21. Learning and Skills	11. Sense of Place 19. Social and Env. Resp. 22. Community Involvement 23. Equality 24. Poverty 25. Health 26. Crime	27. Housing 28. Culture/Sport/Recreation
Assessment Score	- - 0	+ + + +? - -	+ +	0 +	0?	# # -?	+ + + # #	+ + # # + #

**Commentary:** The aspiration to promote Birmingham’s role as a city of international importance potentially brings with it economic and social benefits through creating opportunities for business and employment and wealth creation, leading to a virtuous circle of investment, business activity and innovation, building on the City’s existing and emerging economic strengths. The challenges are ensuring that investment is balanced spatially and temporally, benefitting all citizens through addressing issues exclusion, as well as ensuring that there is not undue pressure on environmental resources through infrastructure development or demand for additional land resources. Notwithstanding the City’s regional and sub-regional role, it will be important to ensure that the benefits of additional investment accruing are captured for the benefit of the City and not diffused to adjacent areas. There are important links to complementary policies PG2, GA1 and TP1-4. The policy might be strengthened through the addition of reference to the importance of protecting the existing environmental qualities of the City.

**Likelihood/Certainty:** Likely to be realised, both positively and negatively

**Geographical scale:** City-wide and beyond

**Temporary or Permanent:** Permanent

**Timing:** Medium to long term

PG3: Making Places																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity		5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing											
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	+	+	++	++	+	+	++	+	+	+	#	#	0	+	+	++	+	+	+	+	+	+	++	++

**Commentary:** The policy presents the opportunity to protect and enhance existing neighbourhoods and develop new ones through attention on regeneration and the creation of attractive and high quality places in tandem with strategic and local economic growth. The extent to which such balanced development can be achieved very much depends on the starting point of particular localities, but the opportunities to contribute to City-wide environmental enhancement and social inclusion are significant. Securing consistency of design quality will be important and the policy might benefit from reference to this, and this has implications for the creation of 'sustainable neighbourhoods (Policy TP11) and defining precisely how these might look and function.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

GA1: City Centre																													
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity		5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing								
SA Objective	1. Resource Use	7. Waste Reduction & Min.	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Resp.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	+	+	++	++	++	++	++	++	+	?	?	++	+	#	-	#	#	-	++	++	++	+	?	+	+	?	?	++	+

**Commentary:** Promotion of the role of the City Centre as a focus for economic and social advancement of the interests of the City is fundamental to delivering the BDP and realising its wider ambitions for greater economic opportunity and social inclusion. The clear strategy which is of proven delivery capacity and capability is highly likely to realise the goals sets for it, although in doing so, the dangers of benefits not spreading to deprived communities must be recognised, as should the need to ensure that environmental enhancement accompanies economic growth and physical change, and the role of independent retailing in adding to character to the City. The policy could be strengthened by reference to these issues. There are strong links to policies PG1, PG2 and implementation policies TP1, TP3, and TP 5-9.

**Likelihood/Certainty:** Likely to be realised, both positively and negatively.

**Geographical scale:** City centre, City-wide, sub-regionally

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term





GA2: Greater Icknield																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++

**Commentary:** The comprehensive redevelopment of this area offers the opportunity to put into practice the creation of a sustainable neighbourhood which is both relatively self-contained but which also fits into its wider context, being adjacent to the City Centre, for example. Investment in housing and employment should be characterised by a balanced social mix and environmental enhancement which fits into the City-wide green infrastructure network. Much will be dependent upon a masterplan which recognises this wider fit. There are strong links to policies GA1 and GA4, as well as implementation policies TP5, TP11, TP15 and TP16.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Locality and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

GA3: Aston, Newtown and Lozells AAP Area																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++

**Commentary:** The regeneration focus of this policy, founded on an approved AAP, presents the opportunity to realise a revitalised community which more effectively meets the aspirations for the provision of economic and social opportunity. The extent to which these aspirations are able to be realised depends on wider economic circumstances and the ability to attract investment into an area which suffers from multiple disadvantage, and there is a danger of continued marginalisation as attention is focused on the adjacent areas of Eastside, Greater Icknield and the City Centre.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Locality

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

GA4: Sutton Coldfield																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	+	+	+	++	+	?	+	+	+	?	#	#	0	+	+	+	+	+	+	+	?	?	+	++

**Commentary:** Direction of development to Sutton Coldfield should bring economic, social and environmental benefits though increased investment, job creation and service provision. However, development needs to be of an appropriate type which complements existing uses and does not result in over-intensification and loss of sense of place. Application of the SPD on development in this locality will be important in helping to achieve this balance. There are important links to policies GA1, and implementation policies TP5-8 and TP11. The policy could perhaps be improved through reference to environment and design quality, sense of place and synergy with the overall strategy of the BDP.

**Likelihood/Certainty:** Highly likely to be realised, both positively and negatively.

**Geographical scale:** Sutton Coldfield and environs

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

GA5: Sustainable Urban Extension																													
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing						
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	-	0?	-	+++	++	++	+	+	0	+	+	+	+	0	?	#	0	+	?	+	+	+	+	+	+	+	#	+	++

**Commentary:** The development of a sustainable urban extension offers the opportunity to create a relatively self-contained new neighbourhood which in some respects contributes to the environmental enhancement of the locality through green infrastructure provision for example (which may help to offset air quality impacts) and the employment of high design standards in integrating new development with the existing urban area. The character of the development in respect of the high quality design, the provision and use of sustainable transport, trip generation, and waste management for example, will determine its sustainability credentials, but these will only become apparent towards the end of the plan period and beyond, hence the inclusion of a number of uncertain effects.

**Likelihood/Certainty:** Likely to be realised, both positively and negatively.

**Geographical scale:** Locality

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



GA6: Peddimore																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	-	0?	-	++?	+	+	0?	-?	0	0	0?	0?	0?	0?	#	#	-?	++	++	0?	#	#	++	++	+	#	#	#

**Commentary:** The provision of high quality employment land is critical to the strategy of the BDP and existing constraints indicate the necessity of this allocation. There are a variety of negative sustainability effects such as loss of greenfield land and transport impacts, but also the opportunity to try and integrate the development into the existing urban edge and provide for a range of employment opportunities for existing and new residents in the immediate vicinity and further afield.

**Geographical scale:** Locality

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



GA7: Bordesley Park AAP Area																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++

**Commentary:** The regeneration focus of this policy, founded on an approved AAP, presents the opportunity to realise a revitalised community which more effectively meets the aspirations for the provision of economic and social opportunity. The extent to which these aspirations are able to be realised depends on wider economic circumstances and the ability to attract investment into an area which suffers from multiple disadvantage, and there is a danger of continued marginalisation as attention is focused on the adjacent areas of Eastside and the City Centre.

**Likelihood/Certainty:** Likely to be realised, both positively and negatively.

**Geographical scale:** Locality

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

GA8: Cole Valley Triangle																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++

**Commentary:** The focus of development in this locality is primarily on the regeneration of existing housing areas to provide both new build and refurbished properties, with limited greenfield land release at Yardley Sewage Works, combined with employment development, public transport improvements and environmental enhancement using the Cole Valley as linear green infrastructure. The opportunities for creating neighbourhoods which are relatively socially, economically and environmentally sustainable is therefore significant, particularly where the regeneration of adjacent communities can be linked.

**Likelihood/Certainty:** highly likely to be realised

**Geographical scale:** Localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium to long term





GA9: Selly Oak and South Edgbaston																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	+	+	++	++	+	+	+	+	+	?	#	#	0	+	+	+	+	+	+	+	+	?	++	++

**Commentary:** The economic, social and environmental qualities of these areas are likely to be further advanced through the application of this policy, benefitting both the immediate locality and the wider southern suburbs. In principle, dangers of over-intensification and loss of local character will be controlled and ameliorated through the intended SPD for the area. The policy could usefully include reference to how the area might function in combination with the intended investment into the City Centre.

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** Locality and southern City

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



GA10: Longbridge AAP Area																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	++	++	++	++	+	+	++	+	+	+	?	#	0	++	++	++	+	+	+	+	+	+	++	++

**Commentary:** Subject to comprehensive redevelopment and steered by an AAP, investment in this area is intended to make a significant contribution not only to local regeneration, but also to the wider economic growth of Birmingham, particularly along its strategic corridors. As such, the sustainability performance of the policy should be positive, although monitoring of unintended consequences of growth will be needed, for example to identify social exclusion in terms of access to jobs. Arguably, the AAP approach adopted at Longbridge presents a useful model for the sustainable development of a locality through a clear policy framework and ambitious masterplan.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Locality and southern City

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term



TP2: Adapting to Climate Change																													
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth		7. Communities, healthy lifestyles and equality					8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	+	?	#	#	++	++	++	#	#	++	++	?	?	?	#	#	#	#	+	+	?	+	+	?	?	?	#	#	?

**Commentary:** As with Policy TP22, this is a demanding policy for the design and implementation of new development and one which will test the commitment of the City to delivering its aspirations to address climate change and its likely impacts. The sustainability impacts are positive but again tempered by uncertainty as to the scale and speed of change which is likely to be required.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP3: Sustainable Construction																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing															
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	++	++	++	++	++	++	#	#	++	++	+?	#	#	#	#	#	++	++	++	+	+	+	#	#	#	#	++

**Commentary:** As with Policy TP23, this is a demand policy which is likely to yield significant sustainability benefits over the longer term, but which will require close monitoring as to the effectiveness of its implementation. As part of the range and scale of new development which is intended, there is the opportunity to promote exemplar schemes which can be used to test technologies and rolled out more widely (see also TP25).

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP4: Low and Zero Carbon Energy Generation																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing														
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	++	#	++	++	++	++	+	++	++	+?	#	#	++	#	#	#	++	++	+	+	+	+	+	#	#	#	++

**Commentary:** As for Policy TP24, the scale and diversity of new development which will be brought forward over the plan period presents significant opportunities to realise a step-change in the application of energy efficiency, complementing existing schemes and setting new benchmarks for what is expected and can be realised in the sustainability performance of developments. As such the sustainability potential of the policy is significant, albeit with the usual caveats over the extent and timing of implementation.

**Likelihood/Certainty:** Likely to be realised.

**Geographical scale:** Localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP5: Low Carbon Economy																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing													
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	++	#	++	++	++	++	+	++	++	+?	#	#	++	#	#	#	++	++	+	+	+	+	#	#	#	#	+

**Commentary:** The policy complements policies TP22-25 by setting aspirations for taking economic advantages from the shift in the City's approach to energy use and climate change with strongly associated benefits across a range of economic, social and environmental criteria.

**Likelihood/Certainty:** Likely to be realised.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP6: Managing Flood Risk																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	#	#	#	++	+	+?	+?	#	+	#	#	+	#	#	#	#	+	#	#	#	#	++

**Commentary:** Implementation of this policy is closely associated with the City's SFRA and LFRMS, the latter being tested for its sustainability credentials. As such there is no reason to doubt that the policy will have positive sustainability effects across a range of objectives, whilst it is acknowledged that in some localised circumstances, compromises could have to be made.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** City-wide and localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP7: Green Infrastructure Network																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing																		
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	+	+	+	++	+	++	++	+	+	#	+	+	+	++	+	+	+	#	++	+	++	+

**Commentary:** The promotion of the City's GI network will be central to meeting a range of objectives, including health and well-being, biodiversity and climate change adaptation. The policy should therefore help to make a positive contribution as part of strategy development and implementation through the Green Living Spaces Plan and the development management process. The policy would benefit from directly referencing its role in achieving a range of sustainability objectives and perhaps the need for a separate GI Strategy which would help to develop and implement a practical approach to delivering co-ordinated action across the City.

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP8: Biodiversity and Geodiversity																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity		5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing															
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	#	#	#	+	+	++	++	+	+	#	#	+	+	++	+	+	+	#	++	#	++	+

**Commentary:** The sustainability benefits associated with the protection and enhancement of biodiversity are widely recognised and this policy should help to advance these interests across a range of interests. Implemented in the context of a range of other strategies cited in the policy, there should in principle be no negative effects, although close monitoring will be required both for potential negative effects such as loss of habitats, but also whether there is sufficient activity in promoting biodiversity interests in a strategic fashion to the benefit of a range of other plan and policy objectives.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term

TP9: Open Space, Playing Fields and Allotments																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing																		
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	+	+	+	+	+	+	+	+	+	#	#	+	+	++	+	+	+	#	++	+	++	++

**Commentary:** The provision of good quality, accessible open space is fundamental to securing many of the sustainability aspirations of the BDP, in particular the creation of sustainable neighbourhoods which meet the immediate needs of a wide range of the population. Various strategies and their evidence bases reinforce the protection and provision of recreational green spaces, and this policy is a natural complement to those, which, acting in concert, should yield positive outcomes across a range of sustainability objectives. As with GI, close monitoring of policy implementation will be required to ensure that there is no undue erosion of minimum standards and where possible additional provision.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term



TP10: Green Belt																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing														
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	++	#	#	#	#	+	#	#	++	++	++	++	+	+	#	0	#	+	+	#	#	#	++	#	++	0

**Commentary:** The protection of the Green Belt is a key part of national planning policy and fundamental to ensuring that the regeneration-led strategy of the BDP can be implemented. Notwithstanding the need to release areas of Green Belt to meet housing and employment needs, the principle of protection remains and thus conveys positive sustainability benefits across a range of objectives, notably in the protection of environmental resources for future generations, encouraging healthier lifestyles through its recreational role (particularly in the river valleys), and the promotion of the efficient use of land through brownfield development. Nevertheless, there are disbenefits relating to potential effects on job creation and the provision of housing in the places where people wish to live. However, these latter elements are part of a wider national planning debate.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term

TP11: Sports Facilities																													
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth		7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	#	#	#	#	#	#	+	+	+	#	#	#	#	#	#	#	#	+	+	+	+	+	+	+	#	++	+	++	+

**Commentary:** The policy has the potential to meet a range of sustainability objectives through the contribution that sport and recreation make to quality of life, well-being, education and the economy for example. As such, only positive effects are predicted, although notwithstanding the various strategies underpinning sports facilities protection and enhancement, there could well be uncertainty associated with implementation. This will require close monitoring to ensure that full use is being made of the potential of this resource, particularly where additional development is anticipated.

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term

TP12: The Historic Environment																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	+	#	#	#	#	#	#	++	+	#	#	#	#	#	+	#	++	+	+	#	#	#	#	++	0

**Commentary:** In principle, the effects of the implementation of the policy should be positive, where it seeks to find an accommodation between the needs of the changing City and maintaining a sense of identity through protecting cultural heritage assets of various kinds. Protection of these assets should complement objectives associated with enhancing quality of life and economic development through the promotion of tourism for example, although there are potential uncertainties associated with the intensification of the urban area in accommodating housing and the demands of economic development in some localities. There is no reason to doubt that the intentions of cultural heritage protection will be significantly compromised.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term

TP13: Sustainable Management of the City's Waste																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	++	+	#	++	+	+	+	+	#	#	#	#	+?	#	#	#	+	#	#	#	#	#	#	#	#	#	#

**Commentary:** Waste management is one of more significant challenges facing the City, and the intention to seek to minimise waste production yields a range of positive outcomes for sustainable development across the City. There remain uncertainties, however, associated with the lack of capacity in the City to deal with waste and the attendant reliance on waste export, particularly in the context of a likely increase in the waste stream associated with additional development.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP14: New and Existing Waste Facilities																													
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing									
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	++	++	+	#	++	+	+	+	+	#	#	#	#	+?	#	#	-?	+	#	#	#	#	#	#	#	#	#	#	#

**Commentary:** Recognition of the need to increase the City's capacity to deal with waste through recycling, energy recovery and management yields in-principle positive relationships across many SA Objectives, although there remain uncertainties as to the effectiveness and speed of the response in relation to the scale and urgency of the challenge.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP15: Location of Waste Management Facilities																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity		5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing									
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	++	+	#	++	+	+	+	+	#	#	#	#	+	#	#	-?	+	#	#	#	#	#	#	#	#	#	#

**Commentary:** The intention to seek the sensitive co-location of waste management facilities with complimentary uses such as industrial areas should yield positive outcomes, notwithstanding uncertainties associated with capacity to meet demand and delivery of that capacity over time and space. The opportunities to combine the need for waste management with renewable energy generation could be significant in some localities.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP16: Portfolio of Employment Land and Centres																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	+	++	++	++	+	+	+	?	0	?	?	0	?	#	-?	++	++	#	#	#	+	+	?	#	#	#

**Commentary:** This policy offers a balanced approach to the protection and promotion of employment land, providing opportunities for growth across all economic sectors, ultimately to the benefit of all sectors of the population. However, possible additions to the policy could include references to the intention to create sustainable neighbourhoods, the interactions with and provision for sustainable transport and the need to closely monitor how portfolio of land is evolving over the plan period.

**Likelihood/Certainty:** Highly likely to be realised, both positively and negatively

**Geographical scale:** City and region-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP17: Core Employment Areas																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	+	+	+	+	+	+	?	#	?	?	?	?	#	#	?	++	++	?	#	#	+#	+#	#	#	#	#

**Commentary:** Similar to Policies TP1 and TP2, this policy should result in positive sustainability performance across a range of indicators, but the interaction with other policies for employment provision (notably TP1, TP2 and TP10) could perhaps be identified.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP18: Regional Investment Sites																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing						
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+		+	+	+	+	+	+	?	#	?	?	?	?	#	#	?	++	++	?	#	#	+	+	#	#	#	#

**Commentary:** Creation of a series of high profile employment sites which seek to boost the economic performance of the City through significant inward investment should result in meeting a wide range of sustainability objectives, particularly through the spread effects of such development. Inevitably, however, there are questions as to how far such developments have localised environmental impacts, help to meet social goals and whether there is disproportionate attention on these sites as the expense of investment elsewhere across the City.

**Likelihood/Certainty:** Highly likely to be realised,

**Geographical scale:** City and region-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP19: Protection of Employment Land																													
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	+			+				+		+	+	#	#	#	#	#	#	#	++	++	?	#	#	+	+	#	#	#	#

**Commentary:** Similar to Policies TP1, TP2 and TP3, this policy should result in positive sustainability performance across a range of indicators, but the interaction with other policies for employment provision (notably TP1, TP2, TP3 and TP10) could perhaps be identified.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP20: Network and Hierarchy of Centres																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	+	+	#	#	+	++	+	#	+	#	#	#	#	#	#	++	+	++	#	#	+	+	#	#	+	+

**Commentary:** This policy is likely to result in positive sustainability impacts across a range of indicators, although the relationship with complementary policies such as TP1, TP8, TP10 and TP11 could be referenced to identify the importance of a strategic overview of the type and location of employment provision. What, for example, might be the implications of City Centre growth and how is the competition between centres such as Longbridge and Northfield likely to be managed to ensure the sustainable growth of each?

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP21: Convenience Retail Provision; TP22: Small Shops and Independent Retailing; TP23: Promoting a Diversity of Uses within Centres																															
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing			
Assessment Score	#	#	+	#	#	#	++	++	+	#	++	#	#	#	#	#	#	++	+	++	+	+	+	+	+	+	+	+	?	+	++

**Commentary:** These policies are likely to have positive sustainability effects through the promotion of local economic development, and access to local services for all sectors of the population. The policies could perhaps be enhanced through reference to the promotion of sustainable neighbourhoods.

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** Localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term



TP24: Tourism and Tourist Facilities																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	0	#	#	#	#	0?	-	-	#	++	+	+	0	#	#	0	++	+	++	#	+	+	+	#	+	++	#

**Commentary:** Whilst this policy will help to advance the interests of economic development across the City, and ultimately social progress through the provision of job opportunities for example, there are uncertainties as to precisely where the benefits will be most realised (City Centre?) and whether the investment should also focus on environmental enhancements which will help to broaden and reinforce the tourism 'offer'.

**Likelihood/Certainty:** highly likely to be realised, both positively and negatively

**Geographical scale:** City-centre and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Short, medium and long term



TP25: Local Employment																																
SA Theme	1. Natural Resources and Waste							2. CO <sub>2</sub> emissions							3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity				5. Pollution				6. Economic growth	7. Communities, healthy lifestyles and equality							8. Housing
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing				
Assessment Score	+	+	+	+	+	+	++	++	+	#	+	#	#	#	#	#	#	++	++	?	#	#	+	+	#	#	#	#				

**Commentary:** This policy recognises the importance of securing employment opportunities in those localities most in need, as measured by the significant levels of un- and under-employment in inner city areas and edge of city estates. Addressing this issue is significant to securing sustainable development because of the range of issues typically attached to economic inactivity, including social exclusion, health problems and crime. As such the possible scores positively across a range of criteria, notwithstanding the uncertainty which needs to be attached to many of the relationships, reflecting the deep-seated nature of the causes of the problems which will, in some cases, take generations to solve.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP26: Sustainable Neighbourhoods																													
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	++	++	++	++	++	++	++	++	++	+	+	++	+	+	+	#	+	++	++	++	+	+	+	+	+	+	+	+	++

**Commentary:** This policy is central to advancing the quality and robustness of new and existing communities across the City. As such the policy intention scores positively for most criteria, although there is inevitably a degree of uncertainty associated with its implementation, being a long-term and potentially investment-intensive process. However, establishing the basis for the design and location (for example in relation to sustainable transport modes) of such communities is a critical foundation for their progressive delivery, and joining up to form networks of such places over time. What the policy currently doesn't do and which might be strengthened by is reference strategies for the delivery of these aspirations, sectorally and spatially. In principle, many of the proposed regeneration areas (Aston, Bordesley, Icknield Loop, Cole Valley) could pioneer some of the initiatives, although much will depend upon available investment.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP27: Location of New Housing																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	0	#	+	+	+	+	++	++	?	?	+	+	?	?	#	#	#	+	#	+	+	+	+	+	+	+	+	++

**Commentary:** The policy intention to guide the location of new housing according to a range of criteria yields a generally positive sustainability assessment, reflecting prudent resource use and the opportunity to create communities which are served by public transport, and offer opportunities for access to jobs and services. Nevertheless, uncertainties exist in respect of the effectiveness of this approach to delivery and the dangers of certain sites remaining unattractive to development by virtue of their location or viability, for example.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP28: Housing Trajectory																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	-	0	?	+	+	+	+	+	?	?	?	?	?	?	#	#	#	+	#	+	+	+	+	+	+	+	+	++

**Commentary:** Delivery of Birmingham's housing requirement will demand a sustained effort to meet actual and latent demand as well as the aspirations of the BDP for sustainable communities. In principle, the policy will secure positive sustainability performance across a range of criteria, although there is a degree of uncertainty attached to whether the pace of development can be sustained in light of the complexities of site character and the dynamics of the property market. See also policy GA2.

**Likelihood/Certainty:** Likely to be realised, both positively and negatively.

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP29: Type, Size and Density of New Housing																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing													
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	+	++	++	+	+	+	+	+	?	+	+	#	#	#	#	#	+	#	+	#	#	+	+	+	#	#	++

**Commentary:** Promoting the right kind of development is as important and targeting the right places. The policy seeks address the diverse needs of existing and changing populations, as well as recognising the problems associated with increasing the density of development in traditionally low density areas, and the need to apply adequate design considerations. The sustainability performance of the policy reflects the potential benefits of the policy for social and environmental criteria, as well as the uncertainties associated with delivery.

**Likelihood/Certainty:** Highly likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP30: Affordable Housing																													
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing																
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	#	#	+	+	++	++	++	++	+	#	++

**Commentary:** The provision of affordable housing will be central to achieving wider aspirations for community regeneration across the City as well as helping to deliver mixed communities in areas of new development. As such the policy meets a range of social sustainability criteria, although there are uncertainties over the capacity to deliver the proportion of affordable dwellings which is sought across all developments without issues of viability arising.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP31: Housing Regeneration																													
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																					
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	+	+	++	++	+	+	+	+	+	?	+	+	?	#	#	#	#	+	#	+	#	#	+	+	+	+	+	#	++

**Commentary:** The strategy of promoting the regeneration and renewal of existing housing estates is fundamental to delivering the City's housing requirement but also the range of economic, social and environmental objectives which accompany housing delivery. This policy should assist this process in delivering both new and enhanced dwellings in estates across the City, as well as the causes and symptoms of decline which typify them.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP32: Student Accommodation																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions	3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution	6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing																	
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	+	+	#	+	+	?	?	#	#	+

**Commentary:** Meeting the needs of specific sectors of the population such as students aids the sustainability performance of the BDP, particularly where other benefits such as economic development can be secured, in this case assisting the provision of education-related jobs and services and strong links to business development through an educated workforce.

**Likelihood/Certainty:** highly likely to be realised

**Geographical scale:** Localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP33: Provision for Gypsies, Travellers and Travelling Showpeople																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality					8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	+	+	++?	++	++	#	#	+

**Commentary:** A structured approach to providing for the travelling community helps to meet a range of sustainability criteria, including improvements in equality of access, poverty reduction through increased opportunity and health improvement. The policy only makes reference to provision of sites up to 2017 and relies on criteria in the policy for provision over the remainder of the plan period. This could create uncertainties over whether the policy will be realised in practice and hence meeting the equality objective.

**Likelihood/Certainty:** Likely to be realised, although the policy only makes reference to provision to 2017.

**Geographical scale:** Localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP34: Existing Housing Stock																													
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing								
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	+			?			+			#	+		#	#	#	#	#	#	#	+						?			+

**Commentary:** Addressing the issue of empty homes should yield a range sustainability benefits, although the complexity of the issue does mean that there is uncertainty associated with its deliver, particularly spatially where there are persistent issues.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP35: Education																													
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality			8. Housing																
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	++	++	#	+	+	++	++	+	++	+	++	++

**Commentary:** The provision of educational capacity is complex and lead by other strategies such as the Education Development Plan. Nevertheless, the contribution of the policy to realising sustainable development is significant through the economic and social benefits accruing from the adequate spatial provision of educational opportunities at all levels.

**Likelihood/Certainty:** Highly likely to be realised.

**Geographical scale:** Localities and City-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP36: Health																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions		3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity		5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality		8. Housing																
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	#	#	#	#	#	#	++	+	+	+	+	++	++	++	++	#	+	+	#	+	+	+	++	?	++	#	++	+

**Commentary:** This is one of the more challenging areas for policy delivery and holds the potential to realise positive social, environmental and economic benefits. As such the intentions of the policy in itself and the range of partner policies required to ensure its delivery mean that its sustainability performance is strong, albeit caveated with a degree of uncertainty over the extent and effectiveness of its implementation, reflecting the scale and complexity of the issue. The policy could be enhanced through reference to the specific context within which it is to be implement (such as through sustainable neighbourhoods (TP11)) and the development of partner strategies (such as for Green Infrastructure) to help deliver the policy.

**Likelihood/Certainty:** Likely to be realised.

**Geographical scale:** Localities and city-wide

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP37: A Sustainable Transport Network																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	#	++	++	++	++	++	++	+	#	+	+	#	++	#	#	++	++	+	+	++	+	+	+	++	#	+	#

**Commentary:** Changing the way in which people travel through modal shift and investment in network improvements is likely to contribute positively to a wide range of sustainability objectives, creating a more sustainable environment through lowering emissions, for example, contributing to economic development through more efficient connectivity and social progress through greater community engagement with the way in which travel is undertaken. The role of Sustainable Neighbourhoods in helping to realise this policy is likely to be critical.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP38: Walking																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																	
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	#	++	++	++	++	++	++	+	#	+	+	#	++	#	#	++	#	#	+	++	+	+	+	++	#	+	#

**Commentary:** As with Policies TP3 and TP5, the potential benefits of encouraging and creating the conditions for more walking activity are wide-ranging and could make a fundamental contribution to making Birmingham a more sustainable City.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP39: Cycling																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																	
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	++	#	++	++	++	++	++	++	+	#	+	+	#	++	#	#	++	#	#	+	++	+	+	+	++	#	+	#

**Commentary:** As with Policies TP3 and TP4, the potential benefits of encouraging and creating the conditions for more walking activity are wide-ranging and could make a fundamental contribution to making Birmingham a more sustainable City.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP40: Public Transport																												
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution		6. Economic growth	7. Communities, healthy lifestyles and equality	8. Housing																	
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	#	++	++	++	++	++	++	+	#	+	+	#	+	#	#	+	++	+	+	++	+	+	+	++	#	+	#

**Commentary:** The provision and enhancement of public transport is fundamental to realising a more sustainable form and function to the City, and as such a policy to promote investment in network improvements should yield a wide range of sustainability benefits.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP41: Freight																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing							
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	#	+	0	0	?	?	0	+	#	#	#	#	+	#	#	+	++	#	#	#	#	#	#	+	#	#	#

**Commentary:** Enhancement of the City's capacity and efficiency in handling freight should on balance have neutral or positive effects on sustainability objectives, although in some respects these are uncertain and dependent upon implementation and the characteristics of the receiving areas for significant development.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term



TP42: Low Emission Vehicles																																																								
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions					3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth		7. Communities, healthy lifestyles and equality					8. Housing																																		
SA Objective	1. Resource Use		7. Waste Red'n & Minimisation		8. Efficient use of land		2. Sustainable Design		3. Renewable Energy		4. Energy Efficiency		5. Sustainable Transport		6. Reduce the need to travel		9. Reduce climate change		10. Manage Climate Change		12. Built and Historic Env.		13. Natural Landscape		14. Biodiversity		15. Air Quality		16. Water Quality		17. Soil Quality		18. Noise		20. Economy and Equality		21. Learning and Skills		11. Sense of Place		19. Social and Env. Responsib.		22. Community Involvement		23. Equality		24. Poverty		25. Health		26. Crime		28. Culture/Sport/Recreation		27. Housing	
Assessment Score	++	++	#	#	+	+	++	0	+	+	+	#	+	++	+	#	+	+	+	+	+	#	#	#	#	+	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#													

**Commentary:** The promotion of low-emission vehicles and associated infrastructure presents the opportunity to make a bold statement of the intentions of the City to directly address CO2 emissions and also demonstrate how transport within the City can be moved onto a more sustainable footing more generally through changes in travel behaviour including choice of vehicle. This is clearly a long term project, particularly in terms of infrastructure provision, but represents the start of wider changes, which could include economic opportunities given Birmingham's manufacturing strengths.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP43: Traffic and Congestion Management																												
SA Theme	1. Natural Resources and Waste		2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality							8. Housing						
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	?	#	+?	+?	#	#	+?	?	0	#	?	?	?	0	#	#	?	++	#	?	+	+	+	+	?	#	#	+

**Commentary:** The sustainability effects of this policy are likely to be variable, where there are important economic benefits to be gained from more efficient movement around the City, but potential environmental issues associated with enabling more traffic to use existing roads such as impacts on air quality. The policy could benefit from cross-referencing with other Policies such as TP11: Sustainable Neighbourhoods and the range of policies on encouraging sustainable transport.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP44: Accessibility Standards for New Development																													
SA Theme	1. Natural Resources and Waste	2. CO <sub>2</sub> emissions			3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity	5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality				8. Housing														
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing	
Assessment Score	#	#	#	++	#	#	++	++	+	#	+	#	#	+	#	#	+	++	++	++	+	++	++	++	++	++	++	++	++

**Commentary:** By ensuring that new development is well located in respect of community services, a significant positive contribution to sustainable development objectives across environmental, economic and social themes is likely. Implementation of the policy will be of particular importance in realising Sustainable Neighbourhoods and to this end cross-referencing to Policy TP11 would be helpful in demonstrating an integrated approach.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

TP45: Digital Communications																												
SA Theme	1. Natural Resources and Waste			2. CO <sub>2</sub> emissions				3. Climate change adapt.	4. Historic environment, landscape, biodiversity and geodiversity			5. Pollution			6. Economic growth	7. Communities, healthy lifestyles and equality						8. Housing						
SA Objective	1. Resource Use	7. Waste Red'n & Minimisation	8. Efficient use of land	2. Sustainable Design	3. Renewable Energy	4. Energy Efficiency	5. Sustainable Transport	6. Reduce the need to travel	9. Reduce climate change	10. Manage Climate Change	12. Built and Historic Env.	13. Natural Landscape	14. Biodiversity	15. Air Quality	16. Water Quality	17. Soil Quality	18. Noise	20. Economy and Equality	21. Learning and Skills	11. Sense of Place	19. Social and Env. Responsib.	22. Community Involvement	23. Equality	24. Poverty	25. Health	26. Crime	28. Culture/Sport/Recreation	27. Housing
Assessment Score	+	#	#	#	#	#	#	+	+	#	#	#	#	#	#	#	#	++	++	#	+	+	+	+	#	#	+	#

**Commentary:** Enhancement of the City's IT infrastructure is fundamental to economic development, but could also yield wider benefits in terms of social inclusion and the creation of more self-contained neighbourhoods where commuting is reduced for example, and more people have greater opportunities to access on-line information.

**Likelihood/Certainty:** Likely to be realised

**Geographical scale:** City-wide, and in specific localities

**Temporary or Permanent:** Permanent, subject to effective implementation

**Timing:** Medium to long term

# Appendix C

## Scoping Report Baseline

### Birmingham and its Context

Birmingham is at the heart of the West Midlands Region which also contains the city of Coventry and the Black Country city region. It is the major centre for economic activity and is the major contributor to the regional economy. The City has a vibrant city centre, a strong cultural mix and contains many prosperous areas. The continued urban renaissance of Birmingham, as the regional capital, has been crucial to the Region. This period of renaissance has brought about the successful delivery of key infrastructure projects such as the development of extended public transport networks. These have been vital to improving the City's local, regional and national accessibility. The city also has an international airport acting as a key gateway to the region and is well served by the M5, M6 and M40 providing access to a number of key cities across the UK.

### Resource Use

There are no active mineral workings in Birmingham, and no extant planning permissions for mineral extraction. This is due to the lack of naturally-occurring minerals in Birmingham for which there is a demand. As a result, Secondary Aggregates are derived from a very wide range of materials that may be used as aggregates. Secondary aggregates include by-product waste, synthetic materials and soft rock used with or without processing. According to the Study<sup>21</sup>, in 2003, about 4.29 million tonnes of recycled aggregate and about 0.65 million tonnes of recycled soil were produced in the West Midlands.

Most of Birmingham is in the area served by Severn Trent Water with a small area to north served by the South Staffordshire Water Company. In 2004 domestic water consumption was 137 litres/head/day<sup>22</sup>. This was lower than the national average in 2007/08 of 14 litres/head/day (Audit Commission<sup>23</sup>).

The current Water Resources Plan<sup>24</sup>, prepared by Severn Trent Water for the Birmingham Water Resource Zone includes the development of four significant new water resources. These developments mean that the growth identified in the Water Resources Plan can be accommodated without the zone going into deficit. This zone requires new water resource developments to keep the zone in surplus. Without the necessary resource development the zone will go into a significant deficit by 2030. New additional water management measures or water resources will be needed to ensure water is available to meet the needs of new housing.

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<sup>21</sup> Communities and Local Government (2007) Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005: Construction, Demolition and Excavation Waste

<sup>22</sup> <http://www.defra.gov.uk/sustainable/government/progress/regional/summaries/16.htm>

<sup>23</sup> <http://www.defra.gov.uk/sustainable/government/progress/national/16.htm>

<sup>24</sup> Severn Trent Water (2010) Water Resources Management Plan

## Sustainable Design, Construction and Maintenance

Environmental improvements by the City Council during the late 1980s and early 1990s have improved the overall quality of the environment within the City Centre. There have been notable successes in relation to improving the quality of design and the environment, particularly in the City Centre. This was recognised by the award to the city of the RTPI Silver Jubilee Cup in 2004. Good design continues to be evident in recent and ongoing developments, such as the Birmingham High Performance Centre at the Alexander Stadium, the Attwood Green Area and Brindley Place. However, some areas of the City would benefit from being updated now or in the near future. The housing section includes more detail on construction and maintenance of housing, in particular public sector housing.

A number of developments in Birmingham City Centre have implemented sustainable building strategies. These include a joint venture between the City Council and energy company Utilicom to install a new Combined Heat and Power (CHP) network in the Convention Centre Quarter. CHP increases energy efficiency significantly by reducing the amount of energy lost in transmission, reducing energy waste. Furthermore the Broad Street Network delivers shared heating and cooling to the ICC, NIA, Council House, Town Hall, Rep Theatre, Paradise Circus and Hyatt Regency Hotel. CHP networks are also planned for Attwood Green and Eastside.

Eastside was conceived as a demonstration of sustainable development principles. In addition to the CHP network, renewable energy technology like wind and solar power will be placed on site along with green roofs and sustainable urban drainage systems. Several large building schemes in Birmingham have achieved high BREEAM Buildings and Ecohomes/Code for Sustainable Homes ratings, exemplifying sustainable building practice. Commercial buildings include 19 George Road (Excellent), Calthorpe House (Excellent) and Baskerville House (Excellent). The homes at Attwood Green received Excellent Ecohomes standard.

## Renewable Energy

Birmingham imports in the region of 22,800GWhr of energy per year costing the city's population and businesses over £1.5bn, with costs predicted to rise along with fuel prices over the coming years.<sup>25</sup>

The Climate Change Strategic Framework<sup>26</sup> identifies that 46% of Birmingham's CO<sub>2</sub> emissions come from industry, 33% from domestic energy and 21% from road transport. The Framework outlines that Birmingham has limited scope for large-scale renewable energy projects; however energy users can support developments elsewhere through their purchasing decisions. Furthermore it is acknowledged in the Annual Monitoring Report<sup>1</sup> that the City Council currently does not monitor the provision of new renewable energy capacity although consideration is being given by the Council to ways of monitoring additional renewable energy capacity installed through new development.

Photovoltaic panels are currently fitted to some buildings as part of the 'Birmingham Energy Savers Scheme'. The total amount installations that this scheme has produced is 468 (October 201).

<sup>25</sup> Birmingham City Council website 'Renewable Energy'

<sup>26</sup> Birmingham City Council (2009) Cutting CO<sub>2</sub> for a Smarter Birmingham Strategic Framework

The largest renewable energy scheme currently operating in Birmingham is probably the Tyseley Energy from Waste Plant facility which produced a total of over 95,030.50 tonnes of ash between April 2010 and March 2011 and generates 25MWh per annum, from the thermal treatment of waste. A total of 80,241.22 tonnes of bottom ash that was produced was sent for recycling in Castle Bromwich where metals are removed and recycled with the remaining material used within the construction industry. This is substantially short of the target for renewable energy to account for 15% of energy produced by 2020 in the Climate Change Strategy and Action Plan Consultation 2007. The city has a number of operational 'Combined Heat and Power' (CHP) facilities, such as Birmingham Children's Hospital and Aston University which are part of an award winning CHP scheme, which are able to generate and supply heat and electricity for local consumption. The connection of Birmingham Children's Hospital to the CHP scheme has allowed for the supply of heat to Lancaster Circus. Developers have also shown an interest in bring forward Anaerobic Digestion (AD) energy generating schemes. As set out in the AMR 2011, the Council will work positively with developers to realise the opportunities that AD hold and emphasise the potential of AD technology for use within Birmingham City Centre as it is a technology seen by the Government as a sustainable and viable waste management solution which utilises waste as a valuable resource.

### Efficient Energy

There are 100,000 dwellings in the city which are more than 80 years old according to the Birmingham Sustainability Strategy and Action Plan 2000-2005. As a result the construction form is intrinsically energy-poor. Recent developments, such as the Birmingham High Performance Centre at the Alexander Stadium, have incorporated innovative, energy-efficient design. Although they are not referred to as 100% sustainable energy systems, CHP can be a more efficient energy system generating and supplying heat and electricity for local consumption.

Heating is by far the largest domestic use of energy in Birmingham. Space heating accounts for 62% of use, while water heating accounts 22%. This is exacerbated by a large number of homes that do not meet Decent Homes standards, including 49,250 Council-owned homes and an estimated 35,000 private sector dwellings.

Only a very small fraction of Birmingham's building stock is built new each year, so new building standards will take decades to have a significant impact on resource use across the city, making the condition of the existing building stock very important. There are no indicators of the age or quality of the building stock as a whole in Birmingham, but energy use data suggest there are a large number of homes of poor quality that contribute to high energy usage.

The Sustainable Community Strategy sets out a vision for Birmingham in 2026 to become the first sustainable global city in modern Britain. The strategy envisages that in 2026 Birmingham will lead on Climate Change with local energy generation from CHP and cooling schemes will reduce CO<sub>2</sub> emissions. If Birmingham is to become the first sustainable global city it needs to dramatically increase deployment in low carbon energy generation technologies. The UK has signed up to the European Renewable Energy Directive, which sets a target of 15% of all energy generated to be sourced from renewable sources by 2020.

The Climate Change Framework aims that by 2026 Birmingham will provide an improved quality and choice of housing and 'decent' standard for virtually all housing, with efficient heating systems and insulation in line with the best UK cities. Birmingham supports the national commitment that all new homes will be zero carbon by 2016.



## Sustainable Transport

### Rail and Metro

Birmingham New Street Station is a major rail interchange offering direct services to cities across England, Wales and Scotland. There is also a network of suburban and freight rail services and one light rail line. The Sustainable Community Strategy identifies the major improvements planned for New Street Station and further extensions of the Metro. There are plans to extend the Metro from Snow Hill to Five Ways through the City Centre. Furthermore the Strategy indicates that plans have been announced to extend Birmingham International Airport's runway. The Midland Metro is a tram line linking Birmingham Snow Hill to Wolverhampton, via West Bromwich, Wednesbury and Bilston. A two mile extension route is planned from Snow Hill, through the City Centre via Upper Bull Street, Corporation Street, Stephenson Street, Pinfold Street, past the Town Hall and on to Broad Street before terminating at Hagley Road.

### Road

Birmingham has a complex road network with around 12 major radial roads and ring roads traversing the city. There are also three busy motorways: the M5, M6 and M42, located towards the west, north and east of the city respectively. Although there has been a recent rise in the use of the car, there has been a reduction in average travel speeds. Much of this is due to outward migration of people, which has in turn led to longer car journeys; there have also been a number of out-of-town developments in recent years which have encouraged additional car journeys to be made. Increased congestion has however resulted in lower average vehicle speeds.

Congestion is a significant issue and demand exceeds available capacity at certain times and in some locations, both on road and rail. Congestion has indirect and cumulative effects on the economy, on people's health and well being and on air quality. Congestion can make deliveries less reliable and deter investment. Congestion also affects the wider transport of goods and services via the M5 and M6 and whilst the opening of the M6 Toll has provided an alternative for some trips, there are still significant peak hour demands that require management.

The Highways Agency (HA) Midlands Motorway Box (MMB) Route Management Strategy highlights a number of problems and issues that affect both the HA and the local authority networks. The MMB network caters for a mixture of commuter and long distance strategic traffic, the M5 and M6 form part of the Trans-European Network, with a peak hour period of around 18 hours. The route has a high regularity of junctions, 13 miles of the route is elevated making it difficult to plan and carry out maintenance and the MMB is sensitive to changes in demand and flow when large scale events are held such as those at the National Exhibition Centre (West Midlands Local Transport Plan 2006).

Road Safety is important because of the pain, suffering and costs that accidents cause. Casualties are disproportionately higher in deprived areas. The West Midlands Metropolitan Area is on course to reduce the number of people killed or seriously injured by 2010 by 40%, reduce the number of children killed or seriously injured by 50%. This good progress is reflected in the area's designation as a Centre of Excellence for Integrated Transport specialising in road safety.

### Bus and Coach

Approximately 85% of all public transport trips in Birmingham are handled by the city's buses. The bus network is operated by a number of companies, with services along the main radial routes providing good coverage to the City

Centre. There are priority measures in place on a number of these routes, such as Digbeth High Street, while others are planned. Pedestrianisation limits bus traffic to a few key corridors in the City Centre, which reduces capacity and creates significant environmental problems along these routes.

Coach travel is also important, particularly in providing an inexpensive means of longer distance travel for those on low incomes. The city has a number of on-street coach set down and pick up points around the City Centre. The Brewery Street Lorry and Coach Park has capacity for up to 32 18.5/14m vehicles.

### Travel Behaviour

Birmingham has a relatively high percentage of households without a car - 38% compared to the English average of 27%<sup>27</sup>. However, despite this fact, just over half of people who both live and work in the City use their car to get to work, only a fifth use the bus, and a tenth walk or work from home<sup>18</sup>. In contrast, over three quarters of people commuting into the city use a car, about a tenth use the train, and a further tenth travel by bus. Table C1 shows statistics for people travelling to work in Birmingham.

**Table C1 Means of Travel to Work in Birmingham, 2001 (Census 2001)**

Travel to Work - Method	% of those working		
	Live in Birmingham, works outside	Live and work in Birmingham	Work in Birmingham, live outside
Work at/from home	0	9.5	0
Train	2.9	2.4	10.3
Bus	12.8	22.1	10.2
Car	78.3	52.4	75.5
Walk	2.7	10.4	1.2
Other	3.3	3.2	2.8
Total (100%)	79,000	288,000	162,000

Source: ONS 2001 Census

Birmingham draws in workers from across the West Midlands region, and according to the 2001 Census there were about 64,000 more people with a workplace in Birmingham than there were employed residents. Managers, senior officials and professionals make up about 35% of persons commuting into Birmingham, compared with 23% of the City's working residents. Only one tenth of people who both live and work in the City, work from home.

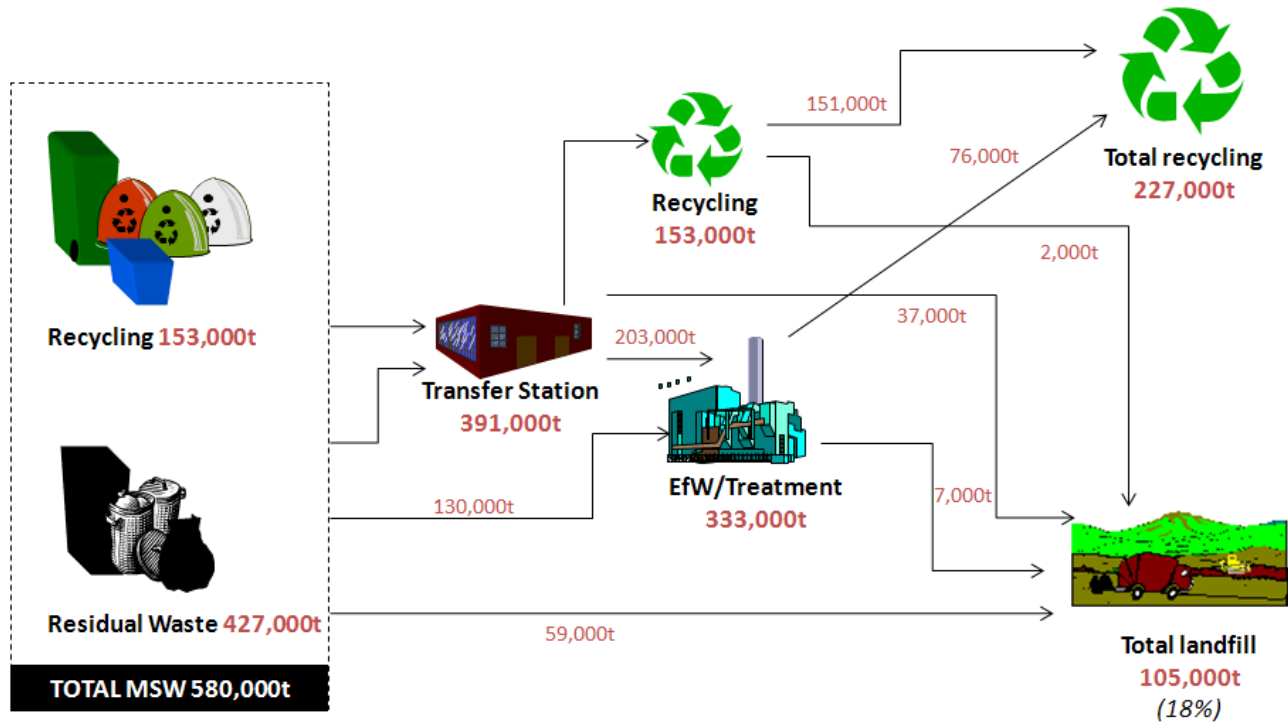
Transport surveys taken across the West Midlands Metropolitan Area in 2001 show that households with a car make 78% more trips than those without a car being 2.25 and 1.26 trips per household per day respectively (West Midlands Local Transport Plan, 2006).

<sup>27</sup> Birmingham City Council (2012) Annual Monitoring Report 2011

### Waste Reduction and Minimisation

In 2010/11 there was over 580,000 tonnes of municipal waste collected of which 67.3% was used to recover heat and power from the Tysley EfW facility. In 2009/10, 31.78% of the City’s municipal waste was recycled or composted. Municipal waste is a significant part of the waste stream, but only represents a small proportion of the total amount of waste produced in Birmingham (Figure C1).

**Figure C1 Destination of Birmingham’s Waste Stream**



**Note: Tonnage figures are rounded to nearest '000 & are based on calendar year 2008 in order to cross match figures with data in the Environment Agency waste data interrogator 2008**

Source: [http://www.bebirmingham.org.uk/documents/Birmingham\\_Total\\_Waste\\_Strategy\\_Final\\_Report\\_24.11.10.pdf](http://www.bebirmingham.org.uk/documents/Birmingham_Total_Waste_Strategy_Final_Report_24.11.10.pdf)

Birmingham recycling and composting rates have been improving over the past 10 years and the current performance (for 2010/11) is 32%. This is up by 0.22% on the previous year and represents significant improvement.

The percentage of waste sent to landfill within the City has declined between 2002/03-2009/10 from 23% to 12.28%. According to the Municipal Waste Management Strategy, the amount of household waste generated per person is lower in Birmingham than in other metropolitan authorities, and its rate of growth has also been lower than the national growth. Birmingham City Council recovers energy from the majority of its ‘residual’ municipal waste through the Tyseley Energy from Waste Plant (EfW)<sup>28</sup>. This reduces reliance on landfill as a disposal option. The Strategy identifies that the City Council has sufficient municipal waste treatment capacity up to 2019.

<sup>28</sup> Birmingham City Council (2006) *Municipal Waste Management Strategy 2006-2026*

### Efficient Use of Land

A very high proportion (90.3%) of employment development in Birmingham has taken place on previously developed land between 1991 and 2011. For office, manufacturing and warehousing development during the 2010/2011 monitoring year, 100% of development took place on previously developed land (PDL). The high proportion of office development on PDL is partially due to the amount of office development that has taken place in the City Centre. On average from 1991 this has increased slightly from 87% to 89% for the 2011 annual monitoring year.

Since 2001/02, the proportion of new housing developed on previously developed land has been high, and generally increasing with the exception of 2010/11 when slightly less housing completions have taken place on PDL. Completions on PDL in 2010/11 exceeded both UDP and RSS targets with no housing completions taking place on Greenfield Land in 2009/10. However, completions on greenfield land increased to 2% during 2010/11 only 89% of dwellings were built on previously developed land in 2008/09.

### Reducing Climate Change

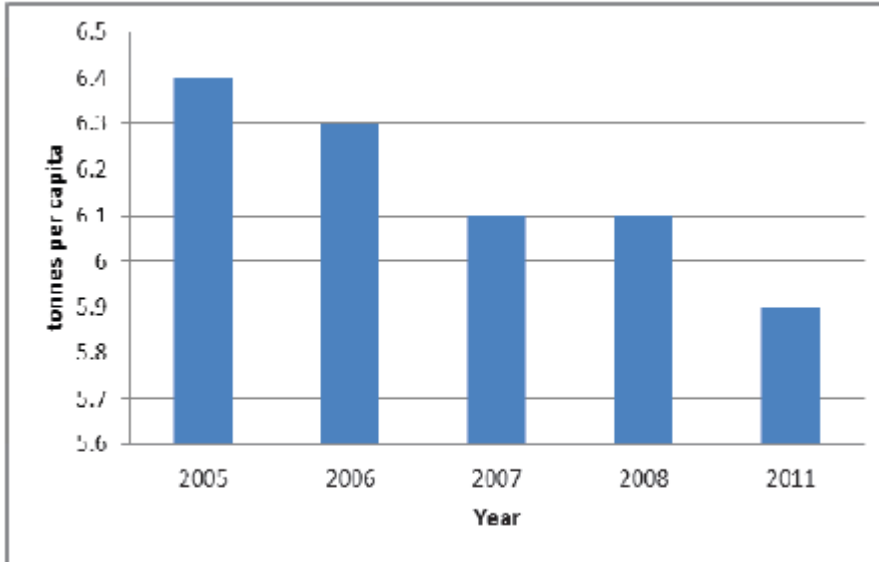
Birmingham imports in the region of 22,800GWhr of energy per year costing the city's population and businesses over £1.5bn, with costs predicted to rise along with fuel prices over the coming years<sup>29</sup>. The Climate Change Strategic Framework<sup>30</sup> identifies that 46% of Birmingham's CO<sub>2</sub> emissions come from industry, 33% from domestic energy and 21% from road transport. Between 2005 and 2011, there was a 12.5% decrease in per capita carbon emissions (Figure 3.7). The Birmingham Climate Change Framework provides a key target to produce a 60% reduction in carbon dioxide (CO<sub>2</sub>) emissions produced in the City by 2026. Some 46% of Birmingham's CO<sub>2</sub> emissions come from industry, 33% from domestic energy and 21% from road transport. Between 2005 and 2011, there was a 12.5% decrease in per capita carbon emissions (Figure C2).

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<sup>29</sup> Birmingham City Council website 'Renewable Energy'

<sup>30</sup> Birmingham City Council (2009) Cutting CO<sub>2</sub> for a Smarter Birmingham Strategic Framework

Figure C2 Change in Per Capita Carbon Emissions 2005-2011 for Birmingham



Source:

[http://www.sustainabilitywestmidlands.org.uk/media/resources/Birmingham\\_Carbon\\_Monitoring\\_presentation\\_Final.pdf](http://www.sustainabilitywestmidlands.org.uk/media/resources/Birmingham_Carbon_Monitoring_presentation_Final.pdf)

Average annual domestic consumption of electricity in kWh was 4,531 in 2004. This was lower than the national average of 4,759kWh in 2004. Average annual domestic consumption of gas was 20,862kWh in 2004 which is higher than the national average.

The Framework outlines that Birmingham has limited scope for large-scale renewable energy projects; however energy users can support developments elsewhere through their purchasing decisions. The largest renewable energy scheme currently operating in Birmingham is probably the Tyseley Energy from Waste Plant facility which produced a total of over 95,030.50 tonnes of ash between April 2010 and March 2011 and generates 25MWh per annum, from the thermal treatment of waste. A total of 80,241.22 tonnes of bottom ash that was produced was sent for recycling in Castle Bromwich where metals are removed and recycled with the remaining material used within the construction industry. This is substantially short of the target for renewable energy to account for 15% of energy produced by 2020 in the Climate Change Strategy and Action Plan Consultation 2007. The City has a number of operational ‘Combined Heat and Power’ (CHP) facilities, such as Birmingham Children’s Hospital and Aston University which are part of an award winning CHP scheme, which are able to generate and supply heat and electricity for local consumption. The connection of Birmingham Children’s Hospital to the CHP scheme has allowed for the supply of heat to Lancaster Circus.

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resource. Whilst it is acknowledged in the Annual Monitoring Report<sup>1</sup> that the Birmingham City Council currently does not monitor the provision of new renewable energy capacity, it is understood that further consideration is being given by Birmingham City Council to ways of monitoring additional renewable energy capacity installed through new development.

There are 100,000 dwellings in the city which are more than 80 years old according to the Birmingham Sustainability Strategy and Action Plan 2000-2005. As a result the construction form is intrinsically energy-poor. Recent developments, such as the Birmingham High Performance Centre at the Alexander Stadium, have incorporated innovative, energy-efficient design. Although they are not referred to as 100% sustainable energy systems, CHP can be a more efficient energy system generating and supplying heat and electricity for local consumption.

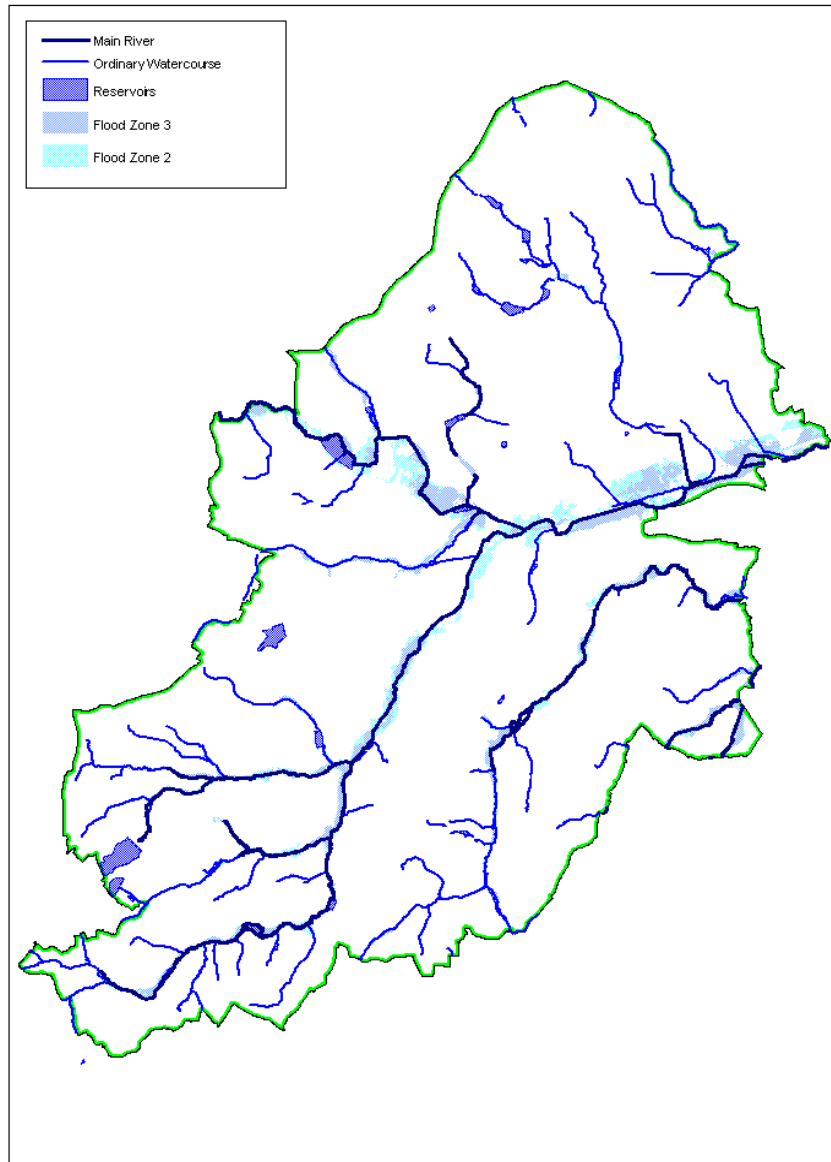
Heating is by far the largest domestic use of energy in Birmingham. Space heating accounts for 62% of use, while water heating accounts 22%. This is exacerbated by a large number of homes that do not meet Decent Homes standards, including 49,250 City Council-owned homes and an estimated 35,000 private sector dwellings. The Climate Change Framework aims that by 2026 Birmingham will provide an improved quality and choice of housing and 'decent' standard for virtually all housing, with efficient heating systems and insulation in line with the best UK cities. Birmingham supports the national commitment that all new homes will be zero carbon by 2016.

The Sustainable Community Strategy sets out a vision for Birmingham in 2026 to become the first sustainable global city in modern Britain. The strategy envisages that in 2026 Birmingham will lead on Climate Change with local energy generation from CHP and cooling schemes will reduce CO<sub>2</sub> emissions. If Birmingham is to become the first sustainable global city it needs to dramatically increase deployment in low carbon energy generation technologies. The UK has signed up to the European Renewable Energy Directive, which sets a target of 15% of all energy generated to be sourced from renewable sources by 2020.

### Managing Climate Change

Many of Birmingham's rivers and streams are susceptible to flooding (whether due to climate change or otherwise), and the City Council is required to consult the Environment Agency on all planning applications within the floodplain zones defined by the Agency. During 2010/11 the City Council received 58 responses on planning applications from the Environment Agency. Only one of these applications was approved with an outstanding Environment Agency objection, and in this case it was felt that the Agency's concerns could be adequately addressed through conditions.

The Level 1 revised Strategic Flood Risk Assessment was published in January 2012 by the City Council which assesses and maps all known sources of flood risk including fluvial, surface water, sewer, groundwater and impounded water bodies, taking into account future climate change predictions, to be used as an evidence base to locate future development, primarily in low flood risk areas. The Level 2 Strategic Flood Risk Assessment (April 2012) assesses possible development locations identified in the Strategic Housing Land Assessment in terms of flood zones and the sequential test. The Environment Agency produced Flood Zones show the areas potentially at risk of flooding from rivers, ignoring the presence of defences. Figure C3 shows the flood zones in Birmingham showing 1 in 100 and 1 in 1,000 year risks associated with Birmingham's rivers and their tributaries.

**Figure C3** Birmingham's Flood Zones

Many of Birmingham's rivers and streams are susceptible to flooding (whether due to climate change or otherwise) and Birmingham City Council is required to consult the Environment Agency on all planning applications within the floodplain zones defined by the Agency. During 2011/12 Birmingham City Council received 17 responses on full planning applications from the Environment Agency. Only two of these applications were approved with an outstanding Environment Agency objection, and in these cases it was felt that the Agency's concerns could be adequately addressed through conditions.

One factor that can help to manage and adapt to the impact if climate change is the development and enhancement of Green Infrastructure (GI). GI is the interconnected network of open spaces and natural areas, such as



greenways, wetlands, parks, forest preserves and native plant vegetation, that can help naturally manage storm water, reduce flooding risk and improve water quality, helping to reduce the City's 'heat island effect'.

### Sense of Place

'Sense of place' reflects local distinctiveness and is the outcome of a well designed and built sustainable community. One way in which a 'sense of place' can be developed is through the development and maintenance of quality Green Infrastructure (GI). GI is a term used to refer to the living network of green spaces, water and other environmental features in both urban and rural areas. It is often used in an urban context to cover benefits provided by trees, parks, gardens, road verges, allotments, cemeteries, woodlands, rivers and wetlands<sup>31</sup>.

GI can provide a number of benefits including:

- increasing property and land values;
- attracting and retaining people ensuring stable populations and labour supply;
- creating a focus for social inclusion, education, training, health and well-being;
- developing landscape character and local distinctiveness, grounded in the principles of Landscape Character Assessment;
- safeguarding and enhancing natural and historic assets; and
- increasing contact between people and nature.

As mentioned above, the maintenance and enhancement of the GI network has a number of benefits and can provide a number of improvements to local areas and help develop areas that convey a sense of place. Residents of Birmingham are positive about their City; according to the Community Cohesion Strategy<sup>32</sup>, opinion polls show that three quarters of people think it is a good place to live. In January 2008, 69% of tourists surveyed felt Birmingham is a good place to visit (Performance Plan 2007/08).

Birmingham is characterised by a large number of well established parks, many of which were created in the 19th century. The City's greenspace is supplemented by a large linear open space network, which is based primarily on the Rivers Cole and Rea and the City's extensive canal network. Birmingham has the benefit of a major regional park; Sutton Park (NNR). The extent of green spaces (excluding areas designated for nature conservation) is shown in Table C2. Eight out of the ten Constituencies exceed the UDP public open space standard of 2ha per 1,000 population and the remaining District almost meets the standard. Of new residential developments between 01 April 2010 and 31 March 2011, 89% were within 400m of existing open space.

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<sup>31</sup> Defra (2011) The Natural Choice: securing the value of nature

<sup>32</sup> Birmingham City Council (2006) Community Cohesion Strategy

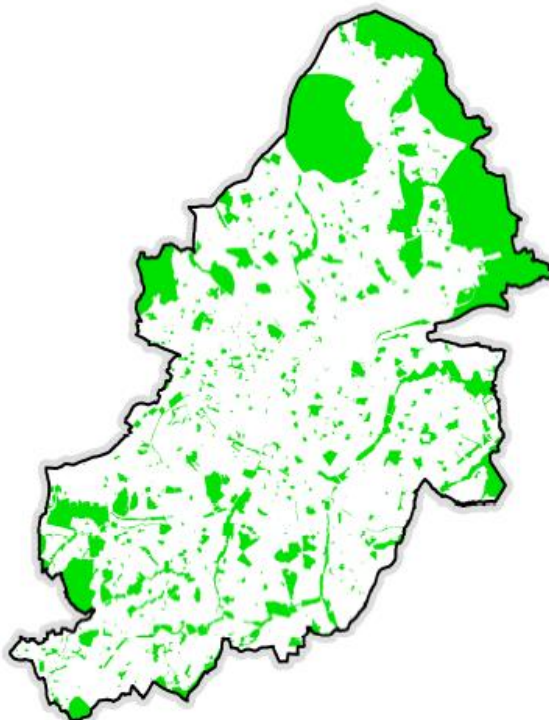


**Table C2 Green Spaces in Birmingham**

Type of Area	Total Area (Hectares)	% of City's Area
Public Open Space	3046.55	11.34
Public Playing Fields	337.206	1.26
Private Playing Fields	281.469	1.05
Private Open Space	68.69	0.26
Educational Playing Fields	166.781	0.62
Golf Courses	657.866	2.46
Statutory Common Land	11.2545	0.04
Allotments (All)	273.26	1.02
Green Belt	4,153.11	15.51

Source: Birmingham City Council, AMR 2011

In April 2009, there were 216 eligible open spaces in Birmingham, and of these, six have 'Green Flag' status. Birmingham's green spaces are mapped in Figure C4.

**Figure C4 Green Spaces in Birmingham**


Source: <http://consult.birmingham.gov.uk/portal/ps/csd/csdraft?pointId=d2670232e7333>

Environmental improvements by the City Council during the late 1980s and early 1990s, such as the development of the ICC and Centenary Square, Victoria Square and the pedestrianisation of New Street, have improved the overall quality of the environment within the City Centre. There have been notable successes in relation to improving the quality of design and the environment, particularly in the city centre. This was recognised by the award to the city of the RTPI Silver Jubilee Cup in 2004. Birmingham also won the European City of the Future Award at the European Property Awards in Munich in 2005.

### Built and Historic Environment

Birmingham has a wide variety of distinctive historic townscapes, buildings and landscapes. The extent of the City's historic resource is summarised in Table C3.

**Table C3** Birmingham's Historic Built Environment

Type of Resource	Number	Area (Hectares)
Scheduled Ancient Monuments	13	448.64
Statutorily Listed Buildings	1470	-
Locally Listed Buildings	423	-
Conservation Areas	30	1223.62
Registered Parks and Gardens	14	-
		Length (Kilometres)
Canals		57.4

Source: Birmingham City Council, AMR (2011)

There are currently 30 Conservation Areas in Birmingham, which accounts for 4% of the land area of the City including five within the City Centre. Some Conservation Areas, such as the Jewellery Quarter and Bourneville, are unique and are nationally recognised. Birmingham also has nearly 1,500 statutorily listed buildings and 14 registered parks and gardens of special historic interest. The City Council applied to the United National, Educational, Scientific and Cultural Organisation for 'World Heritage Site' status in 2011 for the Jewellery Quarter. The City's Listed Buildings range in date from mediaeval churches and houses to important examples of twentieth century architecture. Birmingham also has an extensive network of historic canals, reflecting its key role during the Industrial Revolution in the eighteenth and nineteenth centuries.

The City's archaeological resource is surprisingly varied for such a major urban area. Some remains are recognised as being of national importance, and are protected by scheduling. Known remains range in date from prehistoric earthworks to nineteenth and twentieth century industrial buildings and structures. The Sites and Monuments Record (SMR) maintained by the City Council includes details of all known archaeological remains within the City. These now total almost 5,171 records which has increased in size over the last year.

## Natural Landscape

Although much of Birmingham is built up, there is a significant amount of open land within the City. Landscape character is a key contributor to regional and local identity, influencing sense of place, shaping the settings of people's lives and providing a critical stimulus to their engagement with the natural environment. The National Character Areas (NCAs) provide a description of landscape character across England<sup>33</sup>. These are used by Natural England to provide a context for monitoring landscape change through the Countryside Quality Counts (CQC) project<sup>34</sup>. Birmingham falls within two NCAs, Arden to the south and Cannock Chase and Cank Wood to the north. The part of the City which lies within Arden is almost entirely urbanised. The wider landscape to the south is characterised by a farmed woodland landscape of rolling landform with narrow meandering river valleys.

The National Character Area description relevant to Birmingham states:

*“Birmingham has a clearly-defined concentric pattern of development. Much of the landscape is dominated by 19<sup>th</sup> and 20<sup>th</sup> century housing, the former in characteristic red brick. Canals, parks, golf courses and the river corridor form the main open spaces, with a substantial parkland area around the University at Edgbaston and some low-density garden suburbs like Bournville. Enclosed within the urban area are fragments of older landscapes like Castle Bromwich Park<sup>35</sup>.”*

The change in landscape character in the period 1998-2003 is described in the CQC assessment as:

*“...development pressure continues to be evident throughout the area, with evidence of expansion around many major settlements such as Nuneaton, Coventry, Bromsgrove and Redditch, and expansion of major roads such as the M6 toll<sup>9</sup>.”*

The northern part of the city lies within the Cannock Chase and Cank Wood NCA. Relevant extracts from the JCA are set out below:

*“Cannock Chase and Cank Wood is a landscape dominated by its history as a former forest and chase and by the presence at its centre of the South Staffordshire Coalfield. It forms an area of higher ground, with the towns and large villages of the Black Country rising out of the lowlands of Shropshire and Staffordshire to the west. In the south it merges with Birmingham and Arden. 9% of the area is woodland, 45% is urban and 9% lies within Cannock Chase AONB. Part of the area lies within the Forest of Mercia (Community Forest) and the Black Country Urban Forest.*

*To the north of Birmingham and west of West Bromwich there are many more areas of open land, primarily in agricultural use, but with a large historic park at Sutton Park and with fragments of heathland, such as Barr Beacon.*

*There are medium-sized fields, generally with good quality hedgerows, patches of ancient enclosure fields and areas of semi-natural vegetation including acid grassland, pools, fens and fragments of ancient*

<sup>33</sup> <http://publications.naturalengland.org.uk/category/587130>

<sup>34</sup> <http://www.countryside.gov.uk/LAR/Landscape/CC/cqc.asp>

<sup>35</sup> Source: [http://www.naturalengland.org.uk/Images/jca097-arden\\_tcm2-21191\\_tcm6-5424.pdf](http://www.naturalengland.org.uk/Images/jca097-arden_tcm2-21191_tcm6-5424.pdf)

*woodland. Narrow, hedged lanes are often present and there is a real feeling of countryside despite the nearness of the built-up area<sup>36</sup>.*”

The change in landscape character is characterised in the CQC assessment as:

*“High rate of change to urban (JCA ranked 11th nationally); 46% of JCA is within greenbelt. Marked expansion of fringe into peri-urban around Cannock, Lichfield, Burntwood and Norton Canes. Also development of M6 Toll has had major impact. Character of the area continues to be transformed.”*

Approximately 15% of Birmingham’s land area is designated as Green Belt which lies within the Cannock Chase and Cank Wood JCA. This includes all the open countryside within the City’s boundary, as well as other areas extending into the City, for example along river valleys. There are also areas of open space within the built-up areas of the City, such as parks and playing fields, nature reserves and allotments.

### Biodiversity and Geodiversity

The City has a number of areas that are protected for their nature conservation value. The City’s nature conservation sites include 2 Sites of Special Scientific Interest (SSSIs): Sutton Park and Edgbaston Pool. Sutton Park is also designated as a National Nature Reserve (NNR). There are 10 Local Nature Reserves (LNRs), over 50 Sites of Importance for Nature Conservation (SINCs) and 661.85ha of Sites of Local Importance for Nature Conservation (SLINCs) covering various ancient woodlands, grasslands, lakes, streams, and other important wildlife habitats or examples of natural landscape. Within the City Centre there are a number of sites of local importance for nature conservation (SLINCs), essentially the canal network and the River Rea. These areas, as well as the linear corridors along main rail and Metro lines are key wildlife corridors. Table C4 shows the total area covered by different types of nature conservation sites, and Figure C5 maps these along with other areas of greenspace.

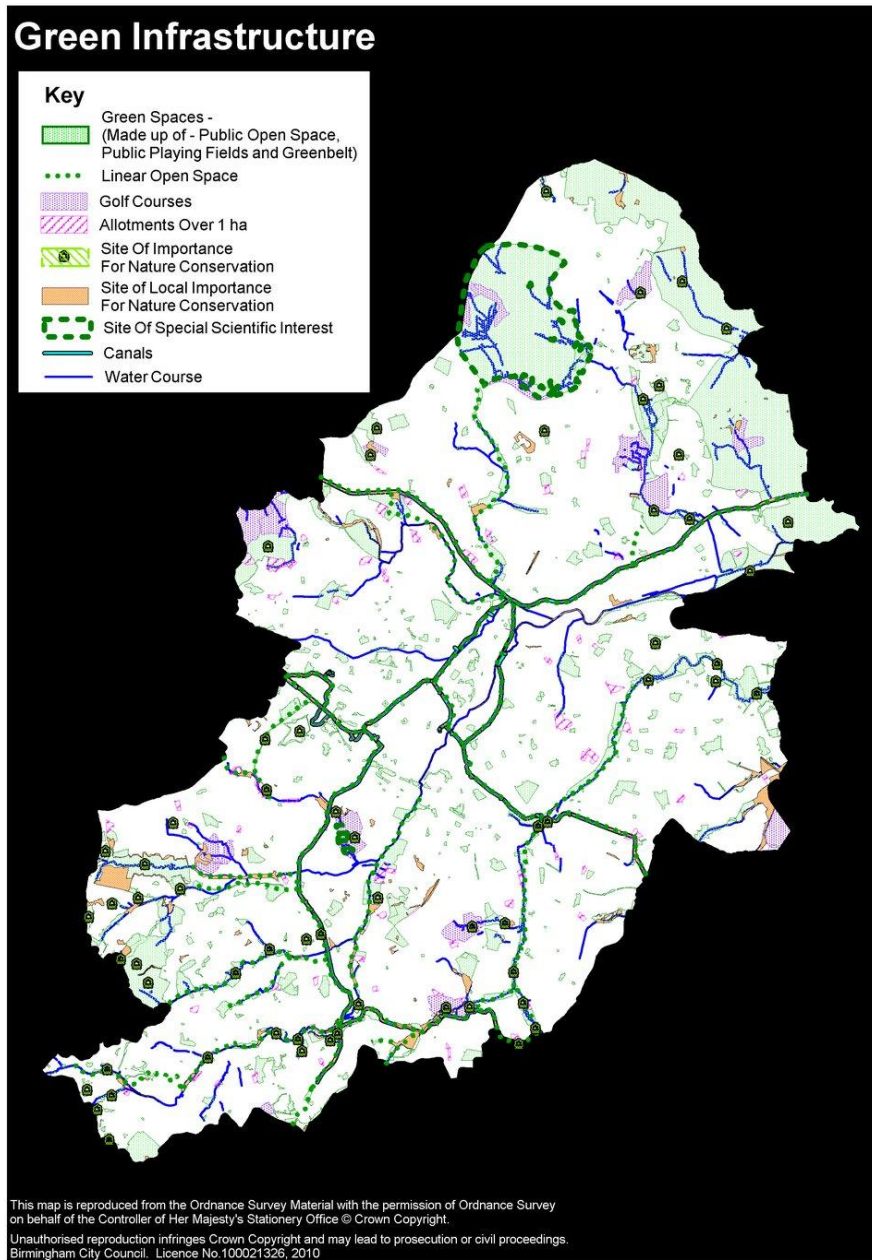
**Table C4** Birmingham’s Nature Conservation Sites

Type of Area	Total Area (Hectares)	% of City’s Area
SSSIs	893.31	3.33
NNRs	811.73	3.03
LNRs	147.73	0.55
SINCs	820.96	3.07
SLINCs	661.85	2.47

Source: Birmingham City Council, AMR (2011)

<sup>36</sup> Source: <http://www.farmsteadstoolkit.co.uk/downloads/jca/JCA%2067.pdf>

Figure C5 Birmingham's Green Infrastructure



Source: <http://consult.birmingham.gov.uk/portal/ps/csd/csdraft?pointId=d2670232e7333>

There has been no change in the overall condition of the City's two SSSIs - Sutton Park and Edgbaston Pool - during the year to 01 September 2011. Approximately 30% of the area designated as SSSI remains in a favourable condition and the remaining 70% in an unfavourable (recovering) condition.

The West Midlands Biodiversity Partnership has developed a number of area based projects which look at different ways of protecting biodiversity by reducing fragmentation of habitats and species. These areas are known as Biodiversity Enhancement Areas.

The Cannock Chase to Sutton Park Project encompasses an area of approximately 670 square km extending from the edge of Birmingham northwards into Staffordshire. The Project area is characterised by two core areas of semi-natural habitat: Cannock Chase and Sutton Park. These areas support significant amounts of lowland heath habitat along with a range of additional habitats including acidic and neutral grasslands, scrub, woodland and wetlands.

Since the project began a number of developments have been made including;

- research undertaken to identify priorities for habitat restoration and re-creation at a landscape scale,
- engagement with biodiversity stakeholders and with a wider group of land management and land use planning professionals with knowledge of the BEA area using research; and
- development of the project with key partners (RDS, CA and local authorities) has led to integration of BEA biodiversity objectives into existing schemes, plans and policies e.g. Environmental Stewardship Higher Level Scheme, Local Planning Authorities' Local Development Frameworks.

The term geodiversity incorporates all the variety of rocks, minerals and landforms and the processes which have formed these features throughout geological time. The geology of the West Midlands is dominated by the South Staffordshire Coalfield, the exploitation of which has contributed greatly to the industrial and economic development of the area<sup>37</sup>. Upper Carboniferous Coal Measures underlie the main conurbation of Wolverhampton, Walsall, West Bromwich and Dudley. Surrounding these shales, sandstones and mudstones are Triassic aged rocks which comprise red mudstones and sandstones. These underlie much of Birmingham and form the solid geology up to Sutton Coldfield. Within the main mass of the Coal Measures are a number of isolated outcrops of older Silurian rock. These shallow water limestones and shales contain a wide range of marine fossils and form the famous outcrops at Wren's Nest and Dudley Castle Hill. There are also a number of igneous intrusions into the Coal Measures. Much of the area has been mantled in thick deposits of boulder clay and sands and gravel deposited by ice sheets and meltwaters during the Ice Ages of the last two million years<sup>38</sup>.

### Air Quality

The whole of Birmingham was declared as an Air Quality Management Area (AQMA) in 2003. The main pollutant is nitrogen dioxide, the primary sources of which are transport and industrial combustion processes.

The transportation sector is a major contributor to the emissions of nitrogen oxides across the city, but there has been a slight decrease in the traffic contribution over the last few years according to the Air Quality Action Plan. The City has 47 significant industrial installations from an air pollution perspective, of which 16 are regulated by the Environment Agency under Integrated Pollution Prevention and Control (IPPC)<sup>39</sup>.

<sup>37</sup> [http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/counties/area\\_ID38.aspx](http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/counties/area_ID38.aspx)

<sup>38</sup> [http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/counties/area\\_ID38.aspx](http://www.naturalengland.org.uk/ourwork/conservation/geodiversity/englands/counties/area_ID38.aspx)

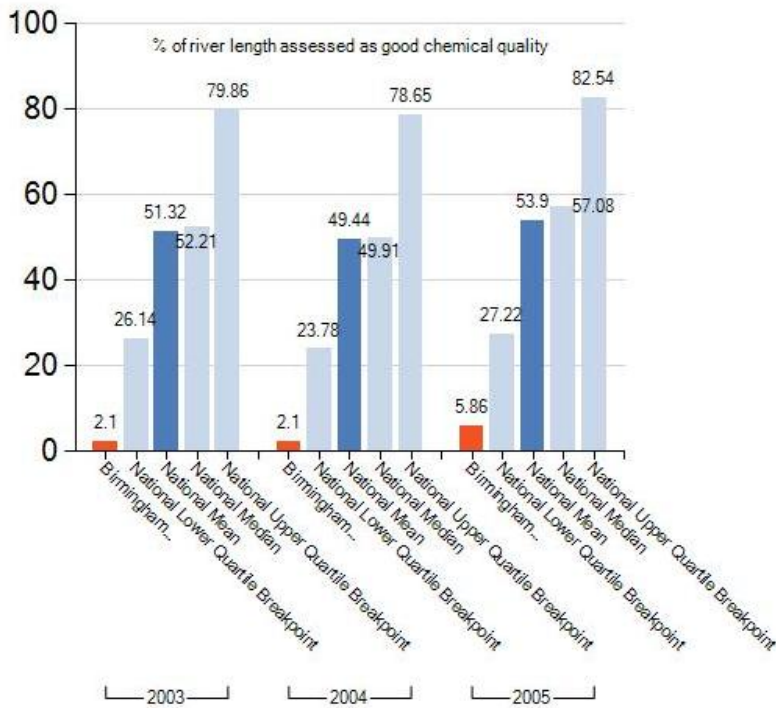
<sup>39</sup> Birmingham City Council (2006) *Air Quality Action Plan*



### Water Quality

The Environment Agency monitors the chemical and biological quality of rivers and waterways. A comparison of the % river length with good biological/chemical quality shows that the figures for Birmingham are significantly below the regional and national averages. Tables C5 and C6 and Figures C6 and C7 show how this has changed over time.

**Figure C6 % River Length Assessed as Good Chemical Quality for Birmingham**



Data supplied by Environment Agency, Date saved: 29/01/2008

Source: Audit Commission Area Profiles<sup>40</sup>

<sup>40</sup> [http://www.areaprofiles.audit-commission.gov.uk/\(5octjx45syuwxoebb44o0lif\)/DetailPage.aspx?entity=10004878](http://www.areaprofiles.audit-commission.gov.uk/(5octjx45syuwxoebb44o0lif)/DetailPage.aspx?entity=10004878)

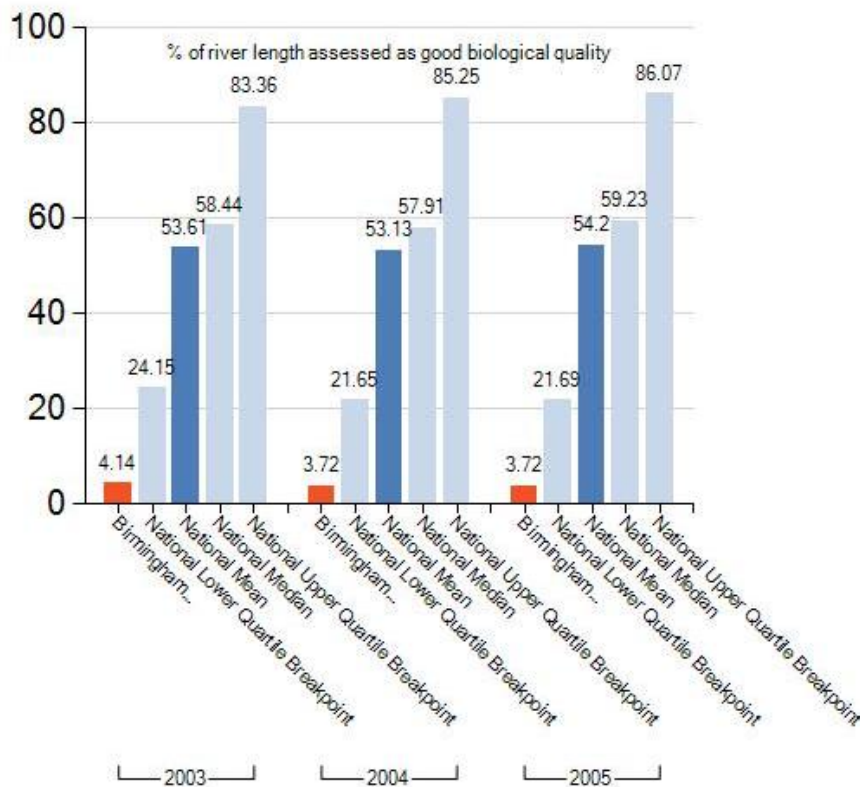
**Table C5 % of River Length Assessed as Good Chemical Quality for Birmingham Compared with West Midlands and England**

Year	2005	2004	2003	2002
Birmingham	5.86	2.1	2.1	5.21
West Midlands	37.8	37.5	40.5	44.3
England	53.9	49.44	51.32	21.5

Source: Environment Agency

Measured as a percentage of the total length of rivers

**Figure C7 % River Length Assessed as Good Biological Quality for Birmingham**



Data supplied by Environment Agency, Date saved: 29/01/2008

Source: Audit Commission Area Profiles<sup>41</sup>

<sup>41</sup> [http://www.areaprofiles.audit-commission.gov.uk/\(5octjx45syuwxoeeb44o0lif\)/DetailPage.aspx?entity=10004877](http://www.areaprofiles.audit-commission.gov.uk/(5octjx45syuwxoeeb44o0lif)/DetailPage.aspx?entity=10004877)



**Table C 6 % of River Length Assessed as Good Biological Quality for Birmingham Compared with West Midlands and England**

Year	2005	2004	2003	2002
Birmingham	3.72	3.72	4.14	0
West Midlands	38.2	34.6	31.7	30.1
England	54.2	53.13	53.61	53.07

Source: Environment Agency

Measured as a percentage of the total length of rivers

### Soil Quality

As most of Birmingham is built-up, there is very little soil of a high quality. There is agricultural land situated to north-east of the City at Sutton Coldfield and a lesser amount is to be found at Woodgate Valley to the south-west. In terms of agricultural land classification, almost the whole of Birmingham is classified as Urban and just a small area in the north and north east are classified as Grade 3 agricultural land (MAGIC website, 2009).

There are a number of sites which could be subject to land contamination within Birmingham. This includes a total of 67 former known landfill sites that have been identified in the City since the 1960s although risk and remediation schemes have already been carried out on many of these sites. The majority of identified landfill sites are situated next to housing and some are located on Birmingham's major aquifer. Public open space within the city, except for the 85ha that former landfills, this land is not likely to be affected by contamination<sup>42</sup>.

Historically, Birmingham has had a very broad spectrum of manufacturing industries. Many of these have the potential to leave a legacy of land contamination. As with many industrial cities, energy requirements have changed as new technologies have become available. Birmingham is no exception. The production of energy from coal to produce town gas or electricity has obvious contamination issues and there are several areas of Birmingham where historically such activities have been undertaken. At the heart of the United Kingdom's road and rail network Birmingham has considerable land which may be contaminated due to transportation activities. These include roads, canals, railways and airports.

Waste disposal activities in Birmingham range from complex waste treatment plants dealing with highly hazardous waste to waste transfer stations handling inert building waste and soil. The potential land contamination issues in respect of landfill sites have been considered previously, but all waste disposal activities will be the subject of assessment.

The Council is required under Section 78R of Part IIA of the Environmental Protection Act 1990 to maintain a Public Register of Contaminated Land of which there are 121 entries.

<sup>42</sup> Birmingham City Council (2008) Contaminated Land Inspection Strategy for Birmingham Second Edition

## Noise

Levels of noise pollution are problems in certain parts of the city according to the Sustainable Community Strategy<sup>43</sup>. Recent surveys have shown that one in eight residents are concerned about noise, and the Council receives over 3000 complaints about noise a year. Traffic is one of the principal sources of this noise. Birmingham has pioneered ‘noise mapping’ to help manage the problem.

## Social and Environmental Responsibility

Large organisations, whether corporations or local authorities, have the ability to deliver social and environmental benefits to the local community. Businesses in Birmingham engage with the community through the Business in the Community member network. Examples of work in Birmingham include Cadbury’s support of Business Action on Homelessness and Birmingham International Airport’s skills development programme. The City Council can similarly influence the social and environmental quality of Birmingham by setting procurement and other policies to reward partners that share its goals.

## Economy and Equality

Birmingham’s economic prosperity was originally built on manufacturing, but changes in the 1970s and 1980s led to a massive decline in this sector. However, highly-skilled, specialist manufacturing remains important to the city. Birmingham has since developed a substantial business and financial services sector through the transformation and growth of the City Centre and has become a major employment centre drawing in workers from across the West Midlands. Birmingham is a major centre not only for business conferences the City but also the West Midlands as a whole. It is an economic cluster with a particular focus on the banking, finance and insurance and distribution, hotels and restaurants and public service sectors. Birmingham is now a major centre for business conferences.

Despite declines in manufacturing, Birmingham is still a major employment centre drawing in workers from across the West Midlands region. Table C7 shows the number of economically active people within Birmingham. Table C8 shows the number of employed residents in Birmingham by Gender and Ethnic Group.

**Table C7 Economically Active Residents (2012)<sup>44</sup>**

	<b>Birmingham (numbers)</b>	<b>Birmingham (%)</b>	<b>West Midlands (%)</b>	<b>Great Britain (%)</b>
All People				
Economically active	449,500	65.7	74.3	76.6
In employment	390,200	57.0	67.6	70.3
Employees	337,900	49.4	58.6	60.3
Self employed	48,400	7.0	8.5	9.5

<sup>43</sup> Birmingham Strategic Partnership and Birmingham City Council (2008) Birmingham 2026: Our vision for the future: Sustainable Community Strategy.

<sup>44</sup> <http://www.nomisweb.co.uk/reports/lmp/la/2038431965/report.aspx#tabempunemp>

	Birmingham (numbers)	Birmingham (%)	West Midlands (%)	Great Britain (%)
<b>Males</b>				
Economically active	255,100	75.6	81.1	82.8
In employment	220,500	65.2	73.0	75.5
Employees	179,500	53.2	60.1	61.7
Self employed	39,000	11.5	12.4	13.4
Unemployed (model-based)	34,700	13.6	9.7	8.6
<b>Females</b>				
Economically active	194,400	56.2	67.6	70.4
In employment	169,700	49.1	62.2	65.1
Employees	158,300	45.8	57.0	59.0
Self employed	9,400	2.7	4.7	5.7
Unemployed (model-based)	24,600	12.7	8.0	7.4

**Table C8** Employed Residents in Birmingham by Gender and Ethnic Group<sup>45</sup>

	2006		2007		2008		2009		2010	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Male	222,500	69.9	221,100	68.9	220,500	67.9	211,000	64.6	215,800	65.8
Female	176,700	54.8	182,000	56.1	177,600	53.9	180,500	54.3	180,700	52.9
White	282,300	70.3	281,300	70.1	284,500	70.1	268,400	67.1	274,200	65.2
Ethnic Minority	115,200	49	121,400	49.8	113,200	45.7	123,200	47.8	121,600	49.1
Total	399,100	62.3	403,000	62.4	398,000	60.9	391,600	59.4	396,600	59.3

At 49.4%, Birmingham's employed residents (excluding self-employed) is noticeably below the Regional rate of 58.6%. The female rate is much lower than the male rate, and both are lower in Birmingham than the national averages; for women there is a 13.2 point difference from the England rate.

Some 34.3% of Birmingham's population is economically inactive (neither working nor seeking work). This is 10.9 points higher than the national rate. The female rate of 43.8% is 19.4 points higher than the male rate. The West Midlands has one of the highest economic inactivity rates in England. Birmingham in particular has a high

<sup>45</sup> ONS

unemployment rate and low employment rate. Table C9 summarises the total number of economic inactivity for those aged between 16-64 in Birmingham. This shows that the highest proportion of economic inactivity are students of whom account for 34.9% of economic inactivity which is 9.8% higher than the national average of 25.1%. non-white economic inactivity rate is 42%, significantly higher than the white rate of 24%. Both rates are above the England averages of 32% and 20% respectively.

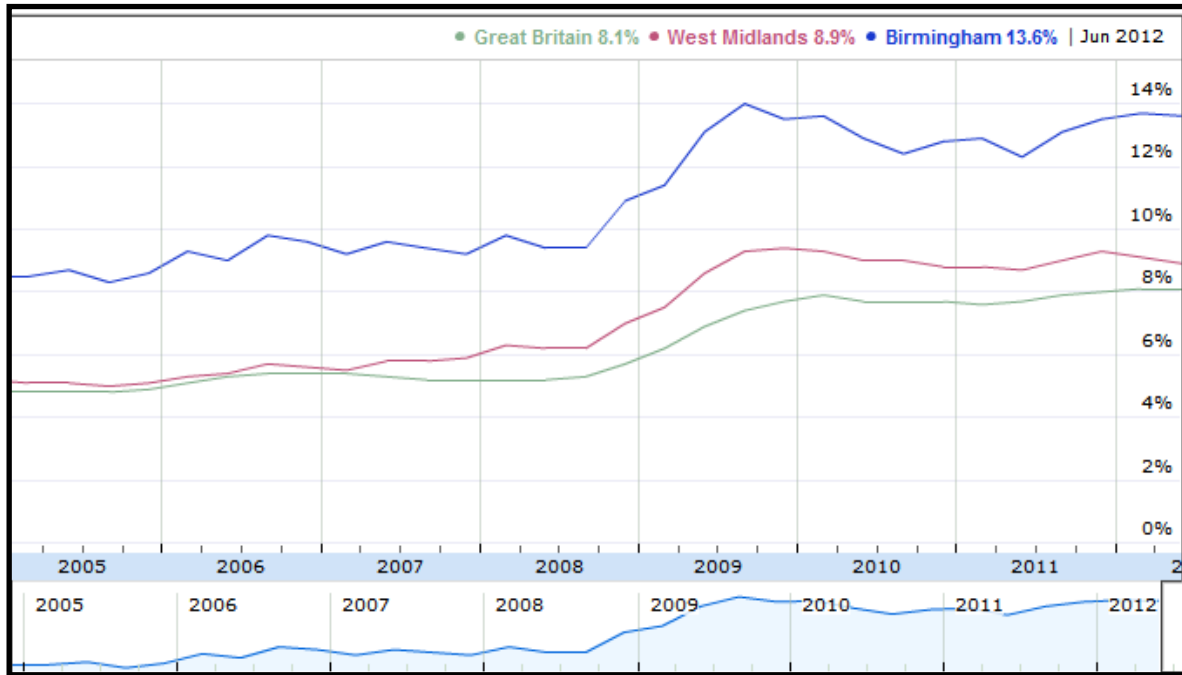
**Table C9 Economic Inactivity in Birmingham (ONS LFS/APS)**

	Birmingham (level)	Birmingham (%)	West Midlands (%)	Great Britain (%)
All People				
Student	80,900	34.9	26.5	25.1
Looking after family/home	61,400	26.5	25.9	24.9
Temporary sick	4,700	2.0	1.9	1.9
Long-term sick	56,600	20.1	21.7	22.2
Discouraged	#	#	0.7	0.9
Retired	22,900	9.9	15.9	16.7
Other	13,700	5.9	7.3	8.4
Total	231,800	34.3	25.7	23.4

Birmingham has seen higher levels of worklessness rate (National Indicator 153) over the years as can be seen from Figure C8.

Employment growth in the city as a whole is set to be relatively subdued over the period 2010 2025 as the economy recovers from the recession and adjusts to a decline in public sector employment. Indeed the forecast level of employment in the city in 2025 is only just returning to the levels seen prior to the recession.

**Figure C8 Economically Active Unemployment Rate 2005-2012**



The ONS website provides details of occupational classification which is often used in market research. Table C10 shows that the percentage of residents in group 1-3 (higher and intermediate managers, professionals and administrative workers) is lower in Birmingham than in the West Midlands Region and England as a whole.

**Table C10 Employment by Occupation June 2011- June 2012**

	Birmingham (numbers)	Birmingham (%)	West Midlands (%)	Great Britain (%)
Soc 2010 major group 1-3	141,500	36.8	39.0	43.5
1 Managers and senior officials	30,300	7.8	9.3	10.1
2 Professional occupations	69,100	17.7	17.3	19.1
3 Associate professional & technical	42,000	10.8	12.1	14.0
Soc 2010 major group 4-5	82,200	21.4	22.8	21.9
4 Administrative & secretarial	44,500	11.4	11.2	11.0
5 Skilled trades occupations	37,700	9.7	11.5	10.8
Soc 2010 major group 6-7	75,900	19.8	17.4	17.3
6 Caring, leisure and Other Service occupations	40,900	10.5	9.0	9.1

	Birmingham (numbers)	Birmingham (%)	West Midlands (%)	Great Britain (%)
7 Sales and customer service occupations	35,000	9.0	8.4	8.1
Soc 2010 major group 8-9	84,700	22.0	20.8	17.4
8 Process plant & machine operatives	31,700	8.1	7.9	6.4
9 Elementary occupations	53,000	13.6	12.8	10.9

The estimated average household income for Birmingham's residents is £27,410 per annum. However, there are significant differences between constituencies, with Sutton Coldfield households enjoying an average income that is 50% above those in Ladywood for example. Table C11 shows the average household income by Constituency for 2011.

**Table C11 Estimated Average Household Income by Birmingham Parliamentary Constituency, 2011 (Experian Ltd)**

Constituency	Total Households	Average Income (£)
Edgbaston	41,695	30,979
Erdington	41,862	24,657
Hall Green	40,205	29,086
Hodge Hill	40,610	22,184
Ladywood	51,265	21,069
Northfield	43,620	26,457
Perry Barr	39,622	25,038
Selly Oak	42,543	28,085
Sutton Coldfield	40,659	42,455
Yardley	42,139	25,790
Birmingham	424,220	27,410

From 1991 to 2011, 228.95 hectares of employment land was lost to alternative uses, including 116.52ha lost to residential uses. On average nearly 6.1ha of employment land is lost per year to a residential use<sup>1</sup>.

The Greater Birmingham & Solihull LEP is a partnership of businesses, local authorities and universities which supports private sector growth and job creation. It was set up to strengthen local economies, encourage economic development and enterprise, and improve skills across the region. The City Deal between the Government and the Partnership was announced in July 2012 which consists of a package of measures that are to be implemented to

drive economic growth designed to exploit the area's economic assets and address its challenges.<sup>46</sup> The first phase of the City Deal is to focus on the delivery of a range of economic benefits for the Greater Birmingham and Solihull area. These include:

- 10,000 additional direct jobs, building on the 40,000 created by the vanguard Enterprise Zone in Birmingham City Centre;
- leveraging in over £15bn of private sector investment over 25 years from £1.5bn of public funding;
- a Single Settlement to cover all economic development funding;
- a world-class skills system which meets the needs of employers and fulfils the expectations of employees;
- 3,560 apprenticeships (AGE) grants to be delivered by March 2013;
- improvements to employers' perceptions of 'work readiness' year-on-year;
- in excess of 2,800 additional new homes through the use of public assets;
- at least 100% capital return on current market value of public assets;
- an Institute of Translational Medicine to respond to national unmet need, unlock growth potential in the NHS and create a portal for SMEs and international pharmaceutical companies;
- £35m of largely private sector clinical trial investment and £50m of free drugs;
- 15,000 homes refurbished delivering savings in domestic energy usage of 26 ktonnes pa of CO<sub>2</sub> and at least 40 public buildings refurbished delivering savings in energy usage of 10 ktonnes pa of CO<sub>2</sub>; and
- retrofitting to the properties of 1,500 people on pension or disability premium and 2,250 people in fuel poverty.

The City Deal comprises five elements: GBS Finance; Skills; Public Assets; Life Sciences and Green Deal, each of which includes specific commitments from the LEP and Government. Progress against these will be monitored to ensure they are delivered.

### Learning and Skills

According to the Community Strategy, the City has a substantial education sector. Over the past 10 years, the pupils and students of the City's schools and colleges have made major improvement in educational achievement, closing the gap on national averages. The percentage of Birmingham's population achieving NVQ Level 3 or above (in 20011) was 43.5%, however this remains below the Region and National average, as is the proportion of the population educated to degree level. As a result, nearly half the high-skilled jobs in Birmingham are currently taken by people who live outside of the City.

<sup>46</sup> <http://centrefenterprise.com/about-the-lep/key-projects-and-issue/>

With regard to current school provision and achievement levels in Birmingham, population forecasts produced by the University of Manchester (in Table 3.14) show that there will be an increase in the number of children between 0-4 (+10,000 between 2006 and 2026) and 5-10 (+13,500).

There are currently several initiatives taken forward by Birmingham Council and the Learning and Skills Council to improve the educational offer and education delivery in the level of skills in Birmingham. Birmingham is one of only 23 local authorities to be chosen by the government to pilot the Primary Capital Programme, a national scheme that aims to develop primary schools and primary age special schools across the country.

Birmingham Academies are a key part of the Transforming Education programme in the City and is intended to deliver a fresh approach to learning and be the key driver in inspiring young people and the community to explore new opportunities. Such academies will support young people to develop skills in construction, engineering, finance and law, health, hospitality, manufacturing, retail and media and arts.

There are numerous programmes on-going to improve further education in Birmingham. These are mainly programmes run by the Learning and Skills Councils such as Train to Gain, Skills Pledge and learning grants. Moreover, the city strategic partnership is to develop a comprehensive approach to training, skills and economic development, and to set up targets for 2012 with a focus on priority wards.

Worklessness and long term unemployment is a key issue for Birmingham's residents and can lead to poor economic performance. Table C12 shows the total number of residents currently claiming Job Seekers Allowance (JSA). JSA is payable to people who are available for, and actively seeking work.

**Table C12 Total JSA Claimants (September 2012)<sup>47</sup>**

	<b>Birmingham (numbers)</b>	<b>Birmingham (%)</b>	<b>West Midlands (%)</b>	<b>Great Britain</b>
All people	50,267	7.5	4.7	3.8
Males	33,095	9.9	6.1	4.9
Females	17,172	5.1	3.3	2.7

## Community Involvement

Community involvement can be measured by a number of indicators, including election turnout. Table C13 shows the election turnout in Birmingham for the 2010 general election by constituency. It can be seen that the turnout varies significantly between constituencies.

<sup>47</sup> ONS claimant count with rates and proportions



**Table C13 General Election Turnout in Birmingham for the 2010 General Election**

Constituency	% Turnout
Sutton Coldfield	67.91
Hall Green	63.63
Selly Oak	62.25
Edgbaston	60.62
Northfield	58.61
Perry Barr	58.97
Hodge Hill	56.60
Yardley	56.48
Erdington	53.53
Ladywood	48.66

Source: UK Political Information Website 2012

Ladywood constituency had the lowest turnout, which was the third lowest turnout in the UK. Conversely, Sutton Coldfield had the highest turnout, but this was only the 217<sup>th</sup> highest turnout in the UK.

One important aspect of community involvement is the extent to which people feel involved in the development of their local area. As part of the Government's Big Society, new legislation has been introduced to encourage local people to have more say in how their area looks. Neighbourhood Planning is a process by which communities can come together and prepare land use plans that will guide the type of developments they would wish to see in their area.

The Sustainable Community Strategy indicates that in 2006, 40% of people agreed that they can influence decisions that affect their local area, an improvement of 22% from 2004. Furthermore the Birmingham Community Strategy (Strategic Assessment Update November 2006) found over half those asked felt that people together can influence decisions in their constituency (most apparent in areas of Ladywood and Sparkbrook), compared to just over a quarter who felt that people collectively had little or no influence (most apparent in Perry Barr and Selly Oak).

## Equality

Birmingham's residents are from a range of national, ethnic and religious backgrounds, as Birmingham is one of the most ethnically diverse cities in Europe. Table C14 summarises the proportion of the main ethnic groups present. Just fewer than 10% are Pakistani, with the next largest groups being Indian and Black Caribbean. Between 1991 and 2001, the Black and Minority Ethnic (BME) population increased, particularly the Pakistani and Bangladeshi groups. BME groups are mainly concentrated in the inner parts of the City. BME groups vary in terms of housing, the labour market, health and age structure. Most established BME groups are growing through natural change and immigration. Since 2001 the city has attracted migrants from a widening range of countries, including Eastern Europe, Africa and the Middle East.

**Table C14 Largest Ethnic Groups in Birmingham and England, 2010**

Ethnic Group	% of Population Birmingham	% of Population England
White British	63.3	82.8
Pakistani	9.7	1.9
Indian	5.8	2.7
Black Caribbean	4.0	1.2
White Irish	2.1	1.1
White Other	2.6	3.6
Mixed Groups	3.2	1.8
Bangladeshi	2.5	0.7
All other groups	6.8	4.1

Source: Experimental Estimates, National Statistics, Crown Copyright 2010

Birmingham has a fairly youthful population. Approximately 46% of residents are younger than 30, compared with the national (England) average of 38%<sup>48</sup>.

Inequalities are reflected in statistics relating to people without a car. Birmingham has a relatively high percentage of households without a car, 38%, compared to the English average of 27%. The percentages without a car are high in the inner parts of the city and in some more peripheral areas. About two thirds of those in social-rented housing live in households without a car, as do nearly half of unemployed people and those not working because of long term sickness or disability. Percentages are particularly high among households containing lone pensioners and lone parents. Percentages are also high among Black, Bangladeshi and White Irish households.

Work undertaken for the West Midlands Local Transport Plan showed that there is generally good accessibility in most places at most times for the 33.7% (2001) of households without a car, due to the extensive bus network. However two particular problems were identified with access for unemployed people to attend job interviews and with access to major NHS hospitals by public transport.

Further detail on equality has been covered in the section on Economy and Equality.

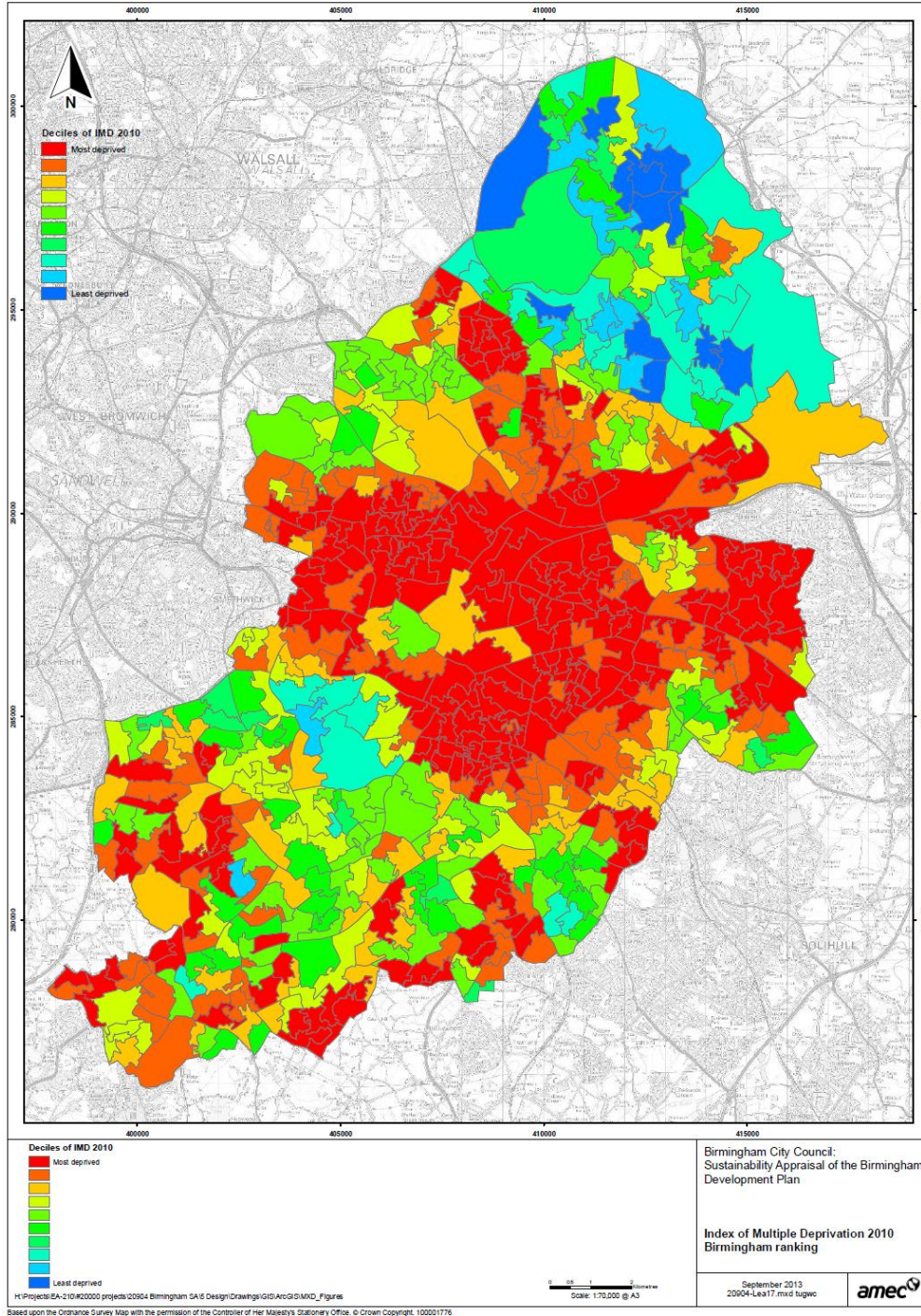
## Poverty

According to the Index of Deprivation, in 2010 about 40% of Birmingham's residents lived in areas that were in the most deprived 10% in England. Concentrations are very high in wards to the east, north and west of the City Centre and also in the Tyburn and Kingstanding Wards to the north of the M6 motorway. Figure C9 maps the

<sup>48</sup> Source: Mid Year Population Estimates, ONS, © Crown Copyright, 2011

Index of Multiple Deprivation across the City and shows the ranking of wards by decile. Child poverty in Birmingham is 33.7% which equates to around 82,100, with the England average being 20.6%<sup>49</sup>

Figure C9 Birmingham's Index of Multiple Deprivation Deciles



<sup>49</sup> Source: [http://www.hmrc.gov.uk/stats/personal-tax-credits/child\\_poverty.htm](http://www.hmrc.gov.uk/stats/personal-tax-credits/child_poverty.htm) (2010) [accessed Oct 2012]

## Health

Information on health for Birmingham can be found in the NHS Health Profile for the area 2011, which gives a snapshot of health in Birmingham. According to the NHS, life expectancy in Birmingham for males is 76.8 years which is 'significantly worse' when compared to an average across England of 78.6 years. Furthermore life expectancy for females is 81.6 years compared to an average across England of 82.6 years.

Adults in Birmingham are less likely than average to follow healthy eating guidelines, but the proportion of obese adults is not vastly different to the England average. A survey undertaken by Sport England<sup>50</sup> reveals that there is a low rate of participation in sport and other physical activity in Birmingham compared with other local authorities within the West Midlands.

Teenage pregnancy rates are 'significantly worse' for Birmingham (47.4 per 1,000) than the England average (38.1 per 1,000). Binge drinking is lower than the England average; however hospital stays for alcohol-related harm were 'significantly worse' in Birmingham for 2010/11 with 2235 per 100,000 rate of admission episodes for alcohol attributable conditions compared to the national average of 1895<sup>51</sup>. Rates of sexually transmitted infections are better than the England average. The incidence of malignant melanoma is lower than average (2012). Estimated levels of adult 'healthy eating' and obesity are worse than the England average.

People in routine and manual occupations have poorer health than those in more highly-skilled jobs, and these people are also more likely to smoke. The infant death rate is greater than the England average in this group. As seen in Table 3.10 in the Economy and Equality section, Birmingham has a higher than average number of people working in lower grade jobs such as process plant and machine operatives than in the rest of the West Midlands and England.

As mentioned above in section 3.2.12, well planned GI can give access to high quality green spaces that will provide opportunities for better health and well being.

Further information on health in Birmingham can be found in the Department of Health Birmingham Health Profile 2012<sup>52</sup>.

## Crime

Burglary crime in Birmingham is going down and new figures suggest that crime is lower than it has been for the last three years. There have been over 5,300 less victims of crime based on figures for April to June 2012, compared to the same period in 2009. Recorded crime has been reducing in four policing area across the city and, when compared to 2009 burglary has been reduced by 17% meaning 276 less burglaries, robbery has reduced by 18% meaning 171 less robberies, and vehicle crime has reduced by almost 17% meaning 453 less vehicles stolen or broken into.<sup>53</sup> However, the rate of violent crime in Birmingham is above the national average, with over 18,000 reported incidents in 2010/11 (Public Health Observatories, 2012). Crime and safety remain a concern of local

<sup>50</sup> [http://www.sportengland.org/research/active\\_people\\_survey/active\\_people\\_survey\\_2/regional\\_results.aspx](http://www.sportengland.org/research/active_people_survey/active_people_survey_2/regional_results.aspx)

<sup>51</sup> Public Health Organisations (2011) Hospital stays for alcohol related harm

<sup>52</sup> Department of Health Birmingham Health Profile <http://www.apho.org.uk/resource/item.aspx?RID=117129>

<sup>53</sup> <http://www.saferbirmingham.org.uk/>



people, however Birmingham City Council's Performance Plan<sup>54</sup> feedback indicates that 95% of Birmingham residents surveyed say they feel safe during the day.

However, there are certain areas in Birmingham which have higher burglary rates than elsewhere in Birmingham, notably Erdington Ward, Lozells in Perry Barr, Bournbrook Student Area in Selly Oak, Frankley and Rubery in Northfield, and Brandwood and Billesley Ward Boundary in Hall Green (Birmingham Community Safety Partnership, 2005). The number of robberies and muggings in Birmingham tends to fluctuate, but there are higher rates in the following four areas than in other areas in Birmingham: Nechells Parkway in Ladywood District, Soho Road Lozells and Aston in Ladywood and Perry Barr Districts; the city centre; Coventry Road on the Ladywood, Bordesley Green and Yardley Border.

## Housing

The Office of National Statistics July 2012 estimates Birmingham's population was approximately 1,073,000 which equates to an increase of 88,000 (9%) between 2001 (984,600) and 2011. Birmingham is the only local authority in England and Wales with a population greater than 1 million. The City covers an area of 26,779ha (267.8km<sup>2</sup>), of which 15,200ha is residential. According to the Housing Development Plan<sup>55</sup> Birmingham's residents live in 406,000-410,000 households. The city has about 414,000 self-contained properties. In April 2006, there were about 68,000 council and an estimated 40,000 registered social landlord social rented homes. Since 2001, the City's population has grown after experiencing declines between 1991 and 2001 due to net out-migration. The gains reflect a shift in the overall balance of migration from negative to positive, coupled with greater natural increases. The main reason for this has been the high levels of international immigration in recent years. These statistics have implications for housing provision. Table C15 shows the change in the number of households in Birmingham, the West Midlands and England between 1991 and 2001.

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<sup>54</sup> Source: <http://www.birmingham.gov.uk/cs/Satellite?c=Page&childpagename=Policy-and-Delivery%2FPageLayout&cid=1223092613434&pagename=BCC%2FCommon%2FWrapper%2FWrapper>

<sup>55</sup> Source: <http://www.birmingham.gov.uk/cs/Satellite?c=Page&childpagename=Housing%2FPageLayout&cid=1223092723273&pagename=BCC%2FCommon%2FWrapper%2FWrapper>

**Table C15 Change in Households in Birmingham, the West Midlands Region and England, 2001 and 2011**

Area	2001 Households	2011 Households
Birmingham	390,800	410,700
West Midlands Region	2,153,700	2,294,900
England	20,451,400	22,063,400
<b>Index of Change</b>		
Birmingham		+0.95
West Midlands Region		+0.93
England		+0.92

Source: Census of Population, 1991 and 2001, Office of National Statistics

Table C15 shows that the number of households in the City increased in the period from 2001 to 2011. Despite the above, the rate of increase in households in Birmingham has been less than the national and regional rates.

The average household size in Birmingham is greater than the national average and is greatest in the West Midlands Region according to the 2011 Census with an average household size of 2.6 people. Birmingham has relatively high proportions of households containing one person or with 5 or more people. Average household size reduced from 2.54 in the period 1991 to 2001, largely as a result of growing numbers of one-person households. However, for the period of 2011 to 2011 the average household size (persons) has increased to 2.56<sup>56</sup>. The City has a relatively low proportion of detached housing, and higher proportions of terraced housing and flats.

According to the 2011 Census, Birmingham was the most densely populated local authority within the West Midlands region with 4,000 people per square kilometre. This is an increase on the 2011 population density of 3,677 people per square kilometre which equates to an increase of 0.9%. The average housing density has decreased from over 74 dwellings in 2009/10 to just over 59 dwellings per hectare. This could be attributed to factors such as the reluctance of the development industry to commit to apartment schemes at the present time.

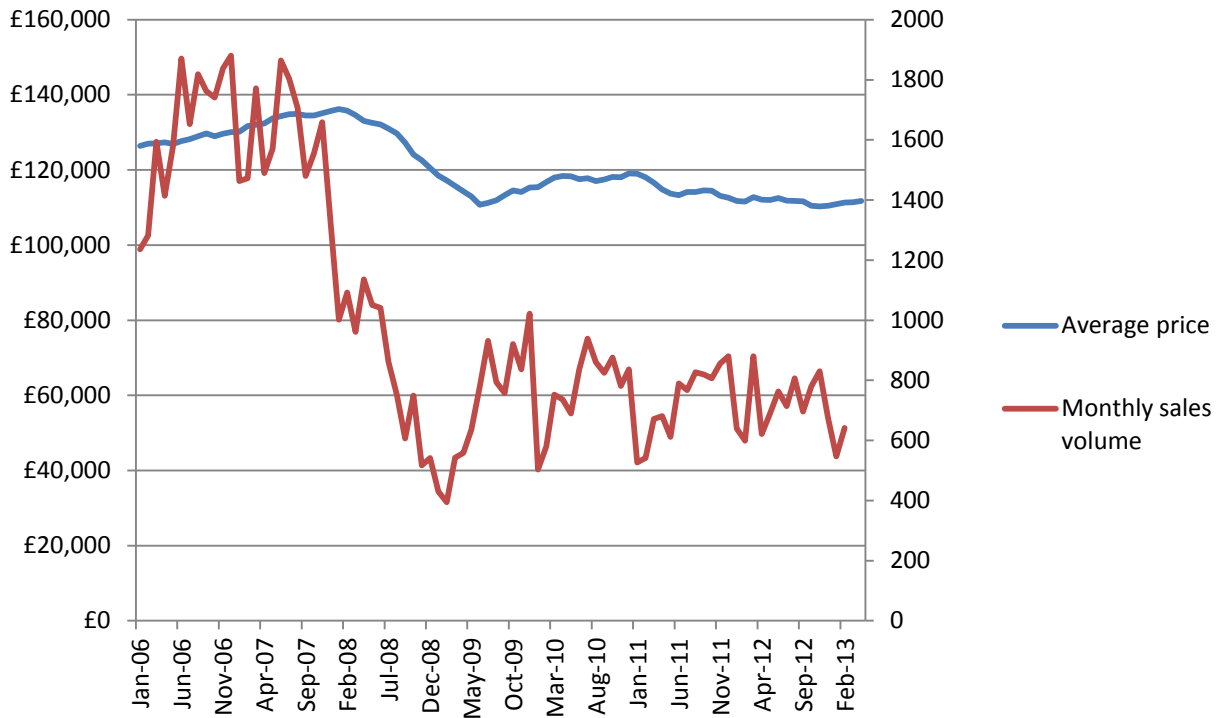
In recent years there have been political concerns over high density suburban development. This has manifested itself in a 'Mature Suburbs: Guidelines to Control Residential Intensification - Supplementary Planning Document' and away from the City Centre this has led to decreasing densities over the past five years.

The mean house price in the City is below the regional average, particularly at the cheaper end of the market. Latest figures from the Land Registry website (April 2013) indicate that the average house price in Birmingham is £111,778. Figure C10 indicates that house prices in Birmingham peaked in January 2008 and sharply declined through to 2010, and now have stabilised. Clearly however sales volumes have declined by over 50% since

<sup>56</sup> Office for National Statistics (24<sup>th</sup> July 2012) **2011 Census: Population and household estimates for England and Wales – supplementary figures part 2**

October 2006. This suggests that the affordability of housing for poorer families and first-time buyers has declined due to other national economic conditions.

**Figure C10 Average House Prices and Sales Volumes in Birmingham 2006-2013<sup>57</sup>**



Birmingham has a relatively high proportion of households renting from Birmingham City Council. Statistics from the Housing Strategy Statistical Appendix 2011 show that within Birmingham the number of local authority rented housing is 64,635 and Registered Social Landlord housing is 40,613 which collectively equates to 24.8% of the total housing supply or the local authority. There is a mismatch between the existing supply of affordable housing and the location of demand. The Birmingham Housing Plan (2010 Review) identifies that the vast majority of Birmingham’s City Council housing meets the Decent Homes standard. In the private sector, Birmingham has a substantial number of older homes that are in need of repair and modernisation.

Historically, homeless applications in Birmingham have been twice the national average; although they are declining. There were 16,429 applicants for housing on the Local Authority Housing Register as at 01 April 2011 (HSSA 2011). Increasingly, older and disabled people wish to remain in their own homes. This results in strong demand for property adaptations, and an implication of need for to build homes to ‘lifetime’ standards. There were 8,367 referrals for assistance from Birmingham City Council in 2010/11.

Birmingham still manages its own stock and, notwithstanding Right to Buy, there remain very significant areas of predominantly local authority housing. These areas are however clustered and there are indeed significant pockets

<sup>57</sup> Land Registry (2012) <http://www.landregistry.gov.uk/public/house-prices-and-sales/search-the-index>

of the City (e.g. Edgbaston and Sutton) where affordable housing is in lesser supply and average houses prices are the highest in the City.

### Culture/Sport/Recreation

Birmingham is internationally known for sports and exhibitions, with well-known venues including the National Indoor Arena and the National Exhibition Centre. Developments in arts, sports and leisure have played a key part in the City's renaissance over the past twenty years. Birmingham has many strengths, including world-class performance, arts, sports and exhibition facilities, and internationally recognised companies of cultural excellence. Many of these facilities are located in the City Centre, including the International Convention Centre; Birmingham Symphony Hall, home of Birmingham Symphony Orchestra, the National Indoor Arena, a major concert and sporting venue; Birmingham Hippodrome; Birmingham Royal Ballet and Birmingham Museum & Art Gallery. These are complemented by smaller venues such as the IKON Gallery, Jam House and Electric Cinema.

The proportion of leisure development that has taken place in centres has varied considerably year on year, and there appears to be no clear trend or pattern. This is probably in part due to the fact that there are various types of leisure development and some (e.g. sports facilities associated with playing fields or pitches), would not necessarily be expected to be located in centres. The relatively high proportion of out-of-centre leisure development overall since 1991 (61%) is skewed by a small number of very large developments, such as 'Star City' (Nechells), Birmingham Great Park and Longbridge which were committed before the current national planning policy guidance came into effect. There has also been a significant amount of leisure development based around existing sports facilities in out-of-centre locations. During 2010/11 88% was built out-of-centre including an indoor sports arena at the Tenby building, Great King Street (Aston). Also out-of-centre, but under construction included the erection of a 5,000 seat stand at the Alexander Stadium in Perry Barr.

Investment in new hotels continues e.g. the Radisson and Etap. Other recent leisure developments in the City Centre include Millennium Point and the Five Ways Leisure complex. A significant amount of leisure development that has taken place in Birmingham since 1991 has been tourism related, for example, the National Sea Life Centre and Millennium Point. The number of overseas residents to the City has increased from 520,000 in 2000, to 700,000 in 2011, which has remained constant since 2007<sup>58</sup>. Birmingham is now the fourth most popular destination in the UK among overseas residents after London, Edinburgh and Manchester.

Culture and leisure facilities both attract people to Birmingham and serve local residents. According to the Community Strategy, surveys show that 45% of Birmingham residents had been to the theatre or a concert in the city in the last year, while 36% had visited a museum or gallery.

### Limitations of the Information and Assumptions Made

There is a substantial amount of baseline information available for Birmingham and the aim in this report has been not to duplicate unnecessarily, but to ensure that sufficient information exists to inform the Sustainability Appraisal process. For this reason the information presents a summary for the various sustainability topics. Other

<sup>58</sup> Source: [http://www.ons.gov.uk/ons/dcp29904\\_274310.pdf](http://www.ons.gov.uk/ons/dcp29904_274310.pdf)



information is presented in other plans and strategy documents on specific topics which have been prepared by the City Council or other bodies.

There are relatively few data gaps in relation to the sustainability appraisal objectives, however limitations identified are set out in Table C16.

**Table C16 Limitations and Assumptions Made**

Nature of data limitation	Commentary	Assumptions made
Data on Sustainable Design, Construction and Maintenance, energy Efficiency and Corporate social and environmental responsibility.	No baseline information on this topic has been identified, although there are initiatives in place to encourage measures designed to help meet these objectives.  Suggested indicators are however set out in Table 4.2.	None
Geographical coverage.	For a limited number of the topics, including certain transport information and landscape character, information is not available for the City Council area and as a result wider geographical areas have been referred to.	It has been assumed that the overall trends and conclusions reached from this information can be applied to the area within Birmingham City.
Date of data collection.	Available data has been collected at different dates. Up to date data has been used wherever possible. Some of the information is based on the 2001 Census and as such is somewhat dated and may not be representative of current circumstances.	2001 Census data has been used as the basis for helping to identify sustainability issues.