

Sunderland City Council Core Strategy Revised Preferred Options Draft Sustainability Appraisal Report



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Appendix 1 Appraisal Matrices

1.0 Introduction

1.1 The Core Strategy is the key document in the Sunderland Local Development Framework (LDF), which will guide the delivery of physical change in the city necessary to achieving the Sunderland Strategy vision. It will set out the spatial strategy for the City for 15 years after its adoption by the City Council proposing broad locations for development across the city. It will provide a framework for where and how much development should take place and how this development will be delivered. It will cover a broad range of issues including housing, retail and the natural and historic environment. Once adopted, all other Development Plan Document's (DPD), must conform to it.

1.2 In September 2009, the City Council undertook consultation for the Core Strategy Alternative Spatial Strategies, which set out varying spatial options for the future development of the city and which was subject to sustainability appraisal. The Alternative Spatial Strategies set out an outline of the reasons for selecting the alternatives dealt with.

1.3 Taking into account representations received during the consultation and the sustainability appraisal, Approach 'D' (which took into account sub-area spatial requirements) including elements of Approach 'C' (focussing development in the current urban area and safeguard the city's green infrastructure) was carried forward to be represented in the Revised Preferred Option policies.

1.4 The Core Strategy Revised Preferred Options has been developed by selecting the most reasonable alternative. The rejected alternatives can be found as part of the suite of documents which make up the Core Strategy, all of which will be available online.

Sustainability Appraisal

1.5 Sustainability Appraisal (SA) is an assessment procedure that seeks to identify and evaluate the effects of a plan on the community, the environment and the economy – the three aspects of sustainability - and to suggest measures for improving the plans content and sustainability performance. The SA process incorporates Strategic Environmental Assessment (SEA) as required by European legislation.¹ The Core Strategy must be subject of SA and should be accompanied by an SA report on the impact of its proposals. SA should be undertaken at each stage of participation in an iterative fashion, appraising policies as they are developed.

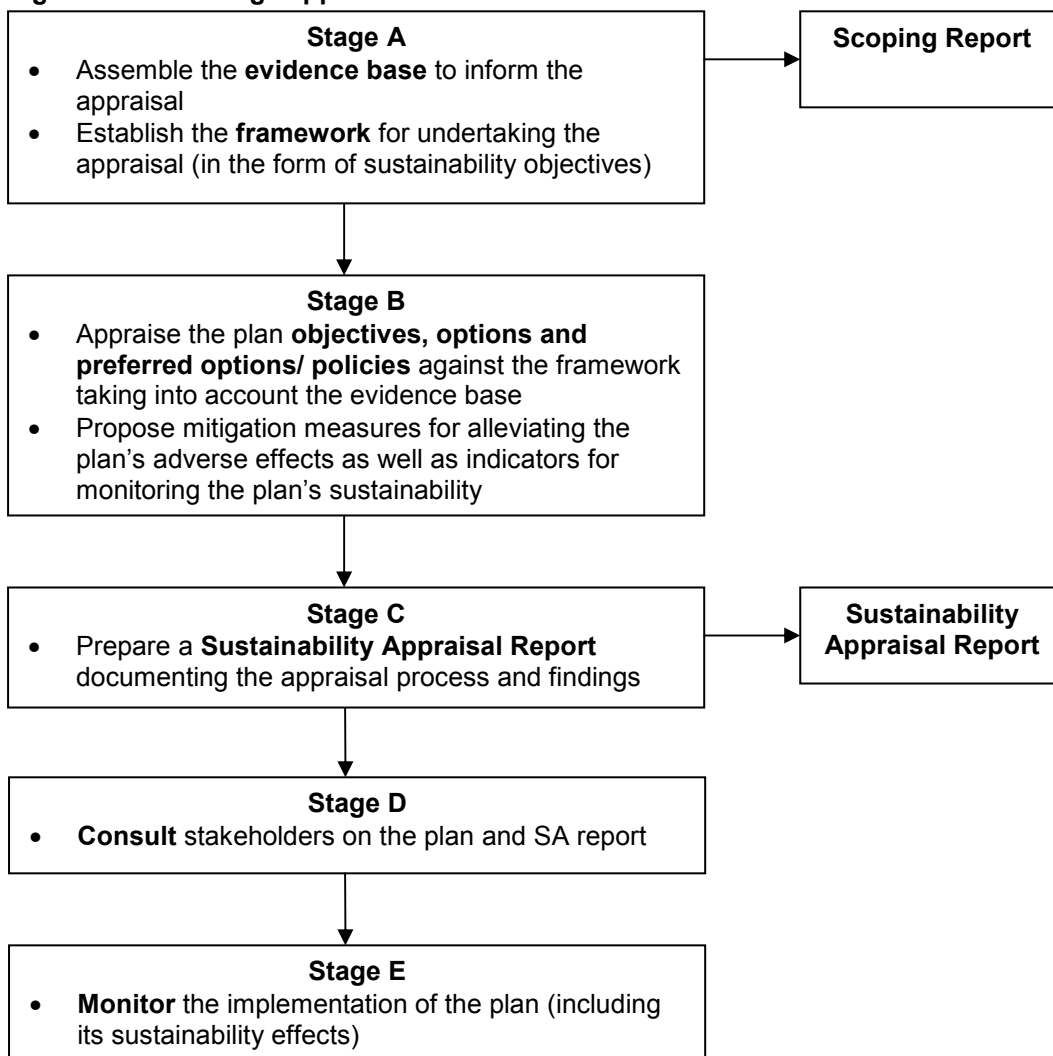
1.6 This report explains the SA that has been undertaken in preparing the Core Strategy Revised Preferred Options for consultation.

¹ Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment

2.0 Process and methodology

2.1 Guidance² for local development documents advocates a five-stage approach to undertaking SA, illustrated in figure 2.1.

Figure 2.1: Five stage approach to SA



2.2 **Stage A** in the process involved gathering an evidence base and developing the framework for undertaking the appraisal by defining SA Objectives. The findings of this stage have been documented in a Scoping Report that underwent consultation (May- July 2009) with stakeholders including the three environmental statutory consultees, English Heritage, the Environment Agency and Natural England. Comments received on the report, including the framework, were incorporated and the Scoping Report was adopted in August 2009.

2.3 This report is part of **Stage B** in the SA process, which involves undertaking appraisal. In the current case this involves identifying and evaluating the impacts of the Revised Preferred Option policies. Mitigation

² <http://www.pas.gov.uk/pas/core/page.do?pagelId=152450>

measures for alleviating adverse impacts and measures to enhance positive effects are also proposed at this stage together with proposals for monitoring the plan's implementation, although at this stage they are not definitive.

2.4 This report represents **Stage C** in the SA process, which involves documenting the appraisal and preparing this report (which incorporates the material required for inclusion in the Environmental Report under the SEA Directive).

2.5 Following statutory consultation at **Stage D**, the SA Report may require updating to reflect changes made in response to representations. **Stage E** concerns ongoing monitoring of significant effects.

Sustainability Appraisal Methodology

2.6 The Scoping Report proposed a framework for the assessment of the Core Strategy. This incorporated the overarching SA Objectives derived from the Integrated Regional Framework for the North East, augmented by locally distinctive criteria. This report has been constructed with a chapter for each of the SA objectives within which we have asked a series of questions:

- What is the policy context?
- What are the key sustainability objectives we need to consider?
- What's the situation now?
- What will the situation be without the plan (up to 2032)?

2.7 These questions correspond to the key requirements of the SEA Directive, as set out in Annex I to the SEA Directive (see Table 2.1). The report then outlines the main implications of the Revised Preferred Options policies.

2.8 It is important to bear in mind when reading these appraisals that throughout the development of the Core Strategy Revised Preferred Options, SA has been a constant factor in informing the direction of policy and therefore, a set of policies has been created which performs very well against SA Objectives.

Table 2.1: Meeting the Requirements of the SEA Directive (1)

Question for each topic	Key requirement of the SEA Directive
What is the policy context?	“an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes” (Annex I(a))
What are the key sustainability objectives we need to consider?	“the environmental protection objectives, established at international, Community or Member State 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” (Annex I(e))
What’s the situation now?	“the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the plan or programme” (Annex I(b)) “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” [NB problems relating to European sites are addressed through the HRA / AA] (Annex I(d))
What will the situation be without the plan (up to 2032)?	“the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme” (Annex I(b))
The appraisal schedule (appendix 1) outlines	
What will the situation be under the Revised Preferred Option Policies?	“the likely significant effects (1) 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 (1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects” (Annex I(f))
How can we mitigate/enhance effects?	“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” (Annex I(g))

2.9 The topic chapters only give a snapshot of the policy context, baseline information and the “business as usual” scenario. More in depth information can be found in the Scoping Report.

2.10 The full appraisal schedules (appendix 1) discusses the short, medium and long term effects, secondary effects and permanent and temporary effects as well as positive and negative effects of the policy. Chapter 17 sets

out the cumulative and synergistic effects of the different policies. The table below provides the indicators for the scoring of effects.

Key

Significant positive impact
Positive impact
Neutral impact, or rough balance of positive and negative effects
Unclear impact, or no data available
Impact could be positive or negative depending on implementation of the DPD
Negative effect
Significant negative effect

2.11 Not all of the requirements of Annex I of the SEA Directive are recorded in the table above. These can be found elsewhere in this report or the Scoping Report (see Table 2.2 below).

Table 2.2: Meeting the Requirements of the SEA Directive (2)

Key requirement of the SEA Directive	Where this can be found
“the environmental characteristics of areas likely to be significantly affected” (Annex I(c))	Scoping Report (which also contains further detail in relation to Annex I a, b, d and e)
“ 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” (Annex I(h))	Chapter 1 of this report and the Core Strategy Alternative Spatial Approaches (September 2009)
“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” (Annex I(h))	Chapter 2 of this report and the Rejected Options paper
“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 ” (Annex I(h))	Scoping Report
“a description of the measures envisaged concerning monitoring...” (Annex I(i))	Chapter 18 of this report

2.12 The differing types of effects³ set out in Appendix I of the Directive have been considered within each SA objective chapter and within Chapter 16 in order to consider performance across all of the SA Objectives.

This Report

2.13 This report sets out the findings of the SA of the Core Strategy Revised Preferred Options, and is structured as follows:

- **Chapter 2** sets out the methodology for the report
- **Chapters 3 – 12** relate to the following Sustainability Appraisal Objectives and set out the
 - The policy context
 - The key sustainability objectives we need to consider
 - What the situation is now
 - What will the situation be without the plan (up to 2032)?
- **Chapter 13** sets out a summary of the impacts of the detailed policies. The chapter also provides a short summary of the impacts of potential Development Management policies which may be incorporated into the plan.
- **Chapter 14 to 16** relate to the SA of Strategic Sites, Locations for Major Development and Local Regeneration Areas.
- **Chapter 17** sets out the SA conclusions and any difficulties encountered in undertaking the appraisal
- **Chapter 18** sets out initial proposals for monitoring
- **Chapter 19** sets out what happens next in the SA process
- **Appendix 1** sets out the full appraisal relating to each policy

³ Secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects

3. Adapting to and mitigating against climate change

Introduction

3.1 Climate change, caused in large part by the emission of greenhouse gases (including CO₂) will worsen droughts in the summer, floods in winter, and extreme events such as storms. The Stern Review on the economics of climate change (2006) suggested that, worldwide, climate change could reduce GDP by 20% unless it is actively tackled now. Climate change has direct and negative impacts on agriculture, coastal and marine ecosystems, biodiversity, human health, water resources and poses threats to infrastructure.

What is the Policy Context?

- **The supplement to Planning Policy Statement (PPS) 1 (Planning and Climate Change)** recognises that there is an urgent need for action on climate change and sets out how planning should contribute to reducing emissions and stabilising climate change.
- **The 2007 Energy White Paper (Meeting the Energy Challenge)** aims to cut CO₂ emissions by 60% by 2050 with real progress by 2020 and to generate 10% of electricity from renewable energy sources by 2010 and 20% by 2020.
- **The Pitt Review** (2008) required local authorities to produce Surface Water Management Plans, where they are needed, which would take an overview of surface water across the area, preventing piecemeal drainage provision and ensuring sustainable development with minimise flood risk.
- **The Sunderland Climate Change Action Plan (2008)** demonstrates how Sunderland is aiming to support the UK Climate Change Act.
- **The European “Covenant of Mayors”** initiative commits Sunderland to submitting a Sustainable Energy Action Plan to the European Commission setting out proposed actions to reduce CO₂.

What are the key sustainability objectives we need to consider?

3.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Put the UK on a path to cut its carbon dioxide emissions by some 80% by 2050
- Flood risk should be considered at all stages of the plan and development process in order to reduce future damage to property and loss of life.
- Consult and take into account advice from the Environment Agency when preparing development plans and considering applications for planning permission, which should incorporate the latest information on climate change.

- Assist in the creation of a positive planning framework for renewable energy and adopt and positively strive to achieve Government's targets and aspirations for renewable energy.

What is the situation now?

3.3 The Regional Scoping Study on Climate Change in the North East⁴, which includes temperature records since 1847, shows a 0.5°C mean temperature rise, with most warming occurring since 1930. Also, a regional trend exists showing that winters have got wetter over the same period.

3.4 By 2008/09, renewable energy projects in the city were producing 7.4MW of energy, including biomass systems.⁵ 9.8MW of renewable energy capacity was installed in 2009/10, taking the total installed capacity existing in the city to 17.2MW.⁶ No renewable energy schemes granted consent in 2010/11.

3.5 In 2007, Sunderland's carbon emissions were 1,864,300 tonnes CO₂, which is a 4.5% reduction since 2006, and a 5.6% reduction since the baseline year of 2005. Of these emissions, 34% were produced by housing, 40% from employers (public and commercial) and 26% from road transport. With initiatives known to have been implemented from April 2008 to January 2010, an estimated 56,000 tonnes CO₂ will be saved, taking total emissions in 2009 to 8% below 2005 levels.

3.6 Recent improvement in the amount of domestic waste recycled has greatly reduced the amount going to landfill, and as a result, methane emissions (a much more powerful greenhouse gas) from landfill have reduced by 17% between 2001 and 2006.

3.7 In Sunderland 1,422 properties have been recorded as at risk of flooding. Out of these properties 101 are in Flood Warning Areas, where 87% are registered to the Environment Agency's flood warning service.

3.8 From 2004/05 to 2009/10 no planning applications have been granted contrary to the advice of the Environment Agency on either flood defence grounds or water quality.⁷

3.9 The key issues, problems and constraints for Sunderland with regard to climate change, flooding and energy resources are:

- Production of greenhouse gases is expected to increase by 8.8% between 2006 and 2021.
- The rate of coastal erosion could increase with higher sea levels and more storms.

⁴ Source: UKCIP "And the weather today is..." Regional Scoping Study on Climate Change in the North East.

⁵ Sunderland City Council Annual Monitoring Report 2008/09

⁶ Sunderland City Council Annual Monitoring Report 2009/10

⁷ Sunderland City Council Annual Monitoring Reports

- Frequency of flooding, in particular from surface water, is expected to increase.
- Sea levels could potentially rise, with the tidal surge inundation a greater possibility.
- The average temperature is projected to increase which will have effects for flora and fauna in the city.
- More heat waves will affect vulnerable populations e.g. the very young and very old.

What will the situation be without the plan (up to 2032)?

3.10 The average temperature in the North East is projected to increase over the next few decades. Data⁸ indicates that by 2020, the city can expect a minimum 1.5°C increase in average summer temperature, rising to 2.2°C by 2050 and 3.7°C by 2080.

3.11 For summer rainfall, Sunderland could see falls of 5% by 2020, 10% by 2040 and 17% by 2080. For winter rainfall, there could be increases of 4% by 2020, 9% of 2040 and 14% by 2080.

3.12 Due to its location by the sea, Sunderland will have to deal with rising sea levels, though whilst the potential for the frequency and level of flooding will increase, this will be limited in location due to the nature of the River Wear Valley and the raised nature of the coastal topography. Flash flooding will also become more common as a result of increasing precipitation intensity.

3.13 Average rising sea levels in the north east are lower than those predicted for the global average. However, rising sea levels, in particular under the high emissions scenario, would have major implications for coastal areas like Sunderland.⁹

Table 3.1: Projected Sea Level Increases

	Low Emissions Scenario	High Emissions Scenario
Global Average	9cm	69cm
North East Average	6cm	66cm
London (greatest increase)	26cm	86cm
South West Scotland (lowest increase)	-2cm	58cm

Source: Source: And the weather today is ...' Climate Change in the North East (2002)

3.14 Future actions and opportunities identified in the Sustainable Energy Action Plan could cut Sunderland's carbon emissions by a further 404,000 tonnes CO₂. This will reduce total emissions to 29% below 2005 levels. Emissions from vehicles are also likely to increase.

⁸ UK Climate Projection 2009 (UKCP09)

⁹ Source: And the weather today is ...' Climate Change in the North East (2002)

4. Living within environmental limits

Introduction

4.1 The re-use of PDL often referred to as brownfield land, has become increasingly significant in development planning, so as to minimise the growth of urban areas into countryside and onto other undeveloped 'greenfield' land. In Sunderland, PDL sites are primarily along the river corridor. This objective also looks at air and water quality.

What is the Policy Context?

- **The 1995 Environment Act** requires local authorities to monitor air quality in the area regularly. If it is deemed necessary it can declare an Air Quality Management Area (AQMA) where air quality exceeds pollution limits.
- **The Air Quality Strategy for England (Working Together for Clean Air, 2002)** sets out key targets for nine pollutants and air quality objectives and policy options to further improve air quality in the UK.
- **The Tyne and Wear Local Transport Plan** seeks to improve air quality and states that wherever possible, the City Council should prevent designating AQMAs
- **PPG 14, Development on Unstable Land**, explains the effects of instability on development and land use and explains that it should be taken into account in the planning process.
- **The Sunderland Strategy** aims to maximise the use of previously developed land in accessible locations for new development, in order to minimise the need to develop on greenfield land and reduce travel requirements.
- **PPS10, Planning for Sustainable Waste Management**, sets out key planning objectives to be integrated into local planning strategies which will help to meet the government waste policy.
- **The South Tyne and Wear Joint Municipal Waste Management Strategy (2007)** outlines objectives and targets which include a 45% increase in recycling/composting and 75% increase in waste recovery by 2020. Furthermore, at a local level the Sunderland Strategy sets out targets to support sustainable patterns of consumption by reducing waste to landfill to less than 25% by 2025.
- **The Water Framework Directive (2000/60/EC)** sets target for the quality of all inland and coastal waters to reach 'good status' by 2015.

What are the key sustainability objectives we need to consider?

4.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Maintain air quality where it is good and improve it in other cases.

- Protect our human health and environment by producing less waste and prioritise waste management in accordance with the waste hierarchy: reduce, re-use, recycle, and recover energy from waste.
- Improve the water quality of river, ground and coastal waters that are considered to be 'at risk' of not meeting Directive objectives.
- Make the best use of land and optimise the development of previously developed land in sustainable locations and maintain the broad extent of the Green Belt

What is the situation now?

Air Quality

4.3 The result of the last Updating and Screening Assessment of Air Quality (USA)¹⁰ found that air quality across Sunderland is currently within pollutant limits. As a result no AQMAs have had to be declared in the city.

4.4 The latest air quality data indicates those days when the levels of Particulate Matter 10 (PM10) are 'moderate' or 'high' or above the Air Quality Strategy. Levels have risen from zero days in 2005 to one and three moderate days in 2006 and 2007 respectively although other pollutants have remained relatively constant.

Land Resources

4.5 In the area from Hendon Promenade southward to the city boundary and beyond, coastal erosion and landslip occurs where defences such as walls/promenades/piers are not present.

4.6 The re-use of previously developed land and buildings (PDL), often referred to as brownfield land, has become increasingly significant in spatial planning. The city's main PDL sites are primarily along the river corridor.

4.7 Healthy soils are essential to sustainable development. Soils form part of most terrestrial habitats, provide a medium in which plants can grow and are, therefore, essential to biodiversity. Similarly, they play a key role in agriculture, with the fertility of the soil having a major bearing on the productivity of the land.

4.8 Agricultural land is categorised into Grades 1-5, with Grades 1, 2 and 3a being considered the best and most versatile. Sunderland's agricultural land is likely to fall into Grade 3. However, at present there is no comprehensive survey information available which reliably identifies areas of Grade 3a or above.

¹⁰ Sunderland Updating and Screening Assessment for Air Quality (2006) Available at: www.sunderland.gov.uk/public/editable/themes/healthy-city/eh/pollution/.../Updating-Screening-Assessment-of-Air-Quality-2006.pdf

Waste

4.9 During 2010/11 33.4% of the city's municipal waste was recovered via recycling or composting, a 6.4% increase on last year's figure. Recycling has been growing steadily for several years, from only 11% in 2004/05. The other primary method of waste disposal remains landfill, although recycling initiatives have seen this fall from 80% of the city's waste in 2005/06 to 65.76% in 2010/11.

Water

4.10 The coastal waters adjacent to Sunderland are currently of moderate ecological quality and high chemical quality, with a prediction for 2015 of moderate ecological quality and good chemical quality.

4.11 There are two designated Bathing Waters within the city both of which are located in the seafront area between Seaburn and South Bents, and at Roker. These are considered to be 'sensitive' areas for water quality with any waste water requiring secondary treatment before deposition. Their water quality has been rated as 'excellent' (meeting European Bathing Water guideline standards) but when the bathing season includes periods of heavy rainfall, results can fall to 'good' (mandatory standard).¹¹

4.12 Both Roker and Seaburn beaches had lost their 'Blue Flag Status' in 2008. However, both have now regained it.

4.13 Groundwater quality in the magnesian limestone found in the east of the city is currently rated as poor for both quantitative and chemical quality and predicted to remain poor by 2015. Groundwater in the carboniferous limestone and coal measures further west is currently good in terms of quantitative quality but poor in chemical quality, with the situation again predicted to remain unchanged up to 2015¹².

4.14 The Environment Agency has classed the River Wear as being very good in terms of chemical and biological water quality¹³.

- 4.15 The key issue for the city with regard to this objective include:
- Sunderland still has low levels of recycling and composting when compared regionally and nationally and has higher levels of waste being sent to landfill.
 - The River Wear estuary is currently classified as moderate in terms of both ecological and chemical quality and is considered at risk of not meeting the requirements of the Water Framework Directive by 2015.
 - There are high levels of nitrates and very high level of phosphates entering the river system.
 - Groundwater quality in the magnesian limestone found in the east of the city is currently rated as poor for both quantitative and

¹¹ Environment Agency website '*what's in your back yard*'

¹² Environment Agency '*what's in your back yard?*', March 2009

¹³ Environment Agency '*what's in your back yard?*', March 2009

chemical quality and predicted to remain poor by 2015, which may have implications for water quality abstracted from the aquifers.

- Traffic levels and car ownership and carbon and greenhouse gas emissions are likely to increase as a result of transport, and air quality may then become an issue in the future.

What will the situation be without the plan (up to 2032)?

Air Quality

4.16 The Tyne and Wear Local Transport Plan states that levels of car ownership are growing faster in Tyne and Wear than any other part of England and as a result traffic levels in Sunderland are expected to continue to rise.

4.17 Emissions from vehicles are likely to increase as traffic levels rise and congestion increases. Sunderland City Centre is likely to be most affected as the city's major focus for, shopping and services employment within the region. It is possible that the air quality objectives in this area will be exceeded especially in 'hot spot' areas where levels of nitrous oxides are already close to limits. Whilst continued improvements in vehicular technologies could help to limit emissions it is likely that there would be a net increase in pollutants.

Land Resources

4.18 The Council is keen to promote the reuse of previously developed land, some of which may be contaminated. It is likely that ongoing redevelopment in the City will result in the continuing clean up of contaminated land and the continuing use of previously developed land.

4.19 Continued priority accorded to the reuse of previously developed land will minimise pressure for urban development on the agricultural land resource, the countryside more generally and urban greenspace.

4.20 Significant coastal erosion will continue to take place in the vicinity of the cliff south of Hendon beach to Ryhope Dene due to the lack of defences.

Waste

4.21 Sunderland's municipal waste arisings have been forecast to grow from current levels to 182,655 tonnes by 2021¹⁴. The forecast for 2007/08 was that 161,137 tonnes of waste would be produced. However, the actual number was 155,667- a difference of 5,470 tonnes (3.4%). There has been an upward trend in recycling and composting in the city and this is likely to continue.

Water

4.22 The water quality of beaches in Sunderland is likely to continue to beat a 'Good' or 'Excellent' level. However, the River Wear estuary is currently considered at risk of not meeting the requirements of the Water Framework Directive by 2015.

¹⁴ North East Assembly Apportionment of Future Waste Arisings, Entec Report January 2008

5. Safeguarding and enhancing Sunderland's environmental infrastructure

Introduction

5.1 Large swathes of the city are designated Green Belt and almost 40 percent of the city area comprises of countryside. The city is also home to many urban wildlife sites, open spaces and gardens, which are home to a variety of wildlife. These areas require continued conservation and enhancement.

What is the Policy Context?

- **The European Conservation of Natural Habitats and Wild Fauna and Flora Directive (92/43/EC)** requires the protection of species and habitats of EU nature conservation designations and introduced the concept of Appropriate Assessment.
- **The European Conservation of Wild Birds Directive (79/409/EC)** provides for the protection of all naturally occurring wild bird species and their habitats, with particular protection for rare species.
- **The Biodiversity Strategy for England** promotes sustainable development by ensuring biodiversity considerations are integrated into policies and includes the broad aim that planning, development and regeneration should have minimal impacts on biodiversity.
- **PPS9 (Biodiversity and Geological Conservation)** outlines the Government's vision, which is to conserve, enhance and restore the diversity of England's wildlife and geology by sustaining and improving the quality and extent of natural habitats and geological sites.
- **The Durham Biodiversity Action Plan (DBAP)** aims to help species and habitats that are considered to be under threat. The DBAP promotes the continued protection and enhancement of important sites and species.
- **PPG2 (Green Belts)**, states that the Green Belt must be maintained to prevent urban sprawl and to preserve the openness of the Green Belt.
- **The Durham Heritage Coast Management Plan** aims to promote, protect and enhance the natural beauty of the coast.

What are the key sustainability objectives we need to consider?

5.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Conserve, enhance and restore the diversity of wildlife and geology by sustaining and improving the quality and extent of natural habitats and geological sites.
- Maintain, and where possible, enhance habitats and species that are considered to be under threat.
- Maintain the broad extent of the Green Belt and protect the countryside for the sake of its intrinsic character and beauty
- Preserve the character of the heritage coast

What is the situation now?

Biodiversity and Geodiversity

5.3 Sunderland has many sites of botanical interest and a variety of habitats of value to wildlife, including parts of two Natura 2000 sites, comprising the Northumbria Coast Special Protection Area (SPA) and Durham Coast Special Area of Conservation (SAC).

5.4 The SPA comprises sections of rocky foreshore and during the winter season supports Purple Sandpipers and Turnstones. Key threats to these are the potential loss of feeding habitat (as a result of removal or smothering of the habitat), and non-physical disturbance through noise or visual disturbance (e.g. from dog walking).¹⁵ During the breeding season the SPA/Ramsar site regularly supports pairs of Little Terns.¹⁶ Sources of threats to the breeding Little Tern colonies could potentially include habitat loss and disturbance at the breeding areas, and declines in food supply.¹⁷

5.5 The individual units which make up the SPA, SAC and Ramsar sites are also designated as sites of special scientific interest (SSSI). Within the city there are also a further 17 SSSI, 10 of which are identified for both biological and geological or geomorphical value¹⁸.

5.6 12 of these 17 are in a 100% Favourable condition; 4 are deemed to be 100% Unfavourable Recovering condition, whilst one (The Durham Coast) is classed as being 62.80% Favourable and 37.20% Unfavourable Recovering.

5.7 In addition Sunderland has two Priority Habitats identified in the UK Biodiversity Action Plan (the Maritime cliffs and slopes and Lowland calcareous grassland), and a number of priority habitats with the DBAP Action Plan.

Land Resources

5.8 Although primarily urban and industrial in character, nearly 30 per cent of land in the city is designated Green Belt, covering 70% of the city's rural area, a total of 4211 hectares.

Landscape

5.9 Natural England has mapped England into 159 separate distinctive National Character Areas. Sunderland is included in two of these areas; the Tyne and Wear Lowlands and the Durham Magnesian Limestone Plateau.

5.10 The Hendon Leas to Ryhope coastline forms part of the Durham Heritage Coast. It includes four Local Wildlife Sites, one of which includes a

¹⁵ City of Sunderland Unitary Development Plan, Alteration No. 2 Central Sunderland, Appropriate Assessment

¹⁶ <http://www.jncc.gov.uk/page-161>

¹⁷ City of Sunderland Unitary Development Plan, Alteration No. 2 Central Sunderland, Appropriate Assessment

¹⁸ <http://www.sssi.naturalengland.org.uk/Special/sssi/report.cfm?category=C,CF>

regionally important geological/geomorphological site and is characterised by a mix of open space/agricultural land uses. Natural England has defined the coastline as a nationally important landscape.

5.21 The key issues for the city with regard to this objective include:

- Climate change;
- Inappropriate built development;
- Priority habitats and species that are recognised nationally and internationally require greater protection.
- Coastal erosion, flooding and rising sea levels have led to the need for re-alignment of coastal defences which may damage designated sites.
- Development along the River Wear corridor may have detrimental effects on protected species.
- Sufficient suitable sites for new development must be maintained to meet requirements but also to protect the city's Green Belt, other settlement breaks and major open spaces
- No policy protection such as is provided by Green Belt status, for the Durham Magnesian Limestone in the southern coalfields.
- The need to conserve and enhance the Durham Heritage Coast, a nationally defined landscape;
- Ensure the protection and enhancement of protected species in designated sites.

What will the situation be without the plan (up to 2032)?

5.22 SSSI designations within the city are predominantly in favourable condition. It is reasonable to consider that this picture may continue.

5.23 The most important designations are the Northumbria Coast SPA/Ramsar/SSSI and the Durham Coast SAC/SSSI. There is little reason to believe that degradation of habitats by human activity will continue at any faster a pace than it is currently, but this will depend on the activities/lifestyles of the population.

5.24 Coastal erosion as a result of climate change however is considered to be the primary long term risk affecting habitats and biodiversity along the Sunderland coastline. This has implications not just for the geomorphology of the coastline but also habitats in the coastal zone. Coastal geomorphology will also be altered as the Shoreline Management Plan leaves the majority of this section of coast to natural forces.

5.25 The application of national policy should ensure that the broad extent of the Green Belt open is maintained.

6.0 Strengthening Sunderland's economy and employment market

Introduction

6.1 In the 19th and 20th centuries, the key drivers of the economy in Sunderland were mining and new heavy industries (including ship building). With the decline of these industries, large numbers of the workforce were made unemployed. However, new primary sources of employment for the city's workforce have witnessed a step-change in the economy providing more sustainable and diverse forms of economic development.

What is the Policy Context?

- **PPS 1, Sustainable Development**, stresses the importance of a strong, stable and productive economy and requires planning authorities to ensure that the necessary infrastructure is provided to support new and existing economic development.
- **PPS4, Planning for Sustainable Economic Growth**, aims to increase growth through building prosperous communities by improving economic performance; reducing the gap in economic growth rates between regions; delivering more sustainable patterns of development; promoting the vitality and viability of town and other centres and raising the quality of life and the environment in rural areas.
- **The Sunderland Strategy** sets out key aims to directly sustain and promote local economic development in the city. The strategy aims to increase average wage and GVA in the city to those of national levels by 2025
- **The Sunderland Economic Masterplan (EMP)** will help guide the city's economic growth over the next 10-15 years. The emerging draft vision for the EMP is *"to create an entrepreneurial university city at the heart of a low carbon economy"*.
- **As part of the North East Local Enterprise Partnership**, Sunderland has also been granted Enterprise Zone Status. This will mean the development of 43 hectares of land and the creation of over 3,000 jobs in the city.

What are the key sustainability objectives we need to consider?

6.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Promote a strong, stable and productive economy that aims to bring jobs and prosperity to all
- Balance the aims of promoting economic development and maintaining a high quality environment
- Improve GVA through increased participation, increased productivity and creating businesses
- Promote the city as a home for low carbon technology.

What is the situation now?

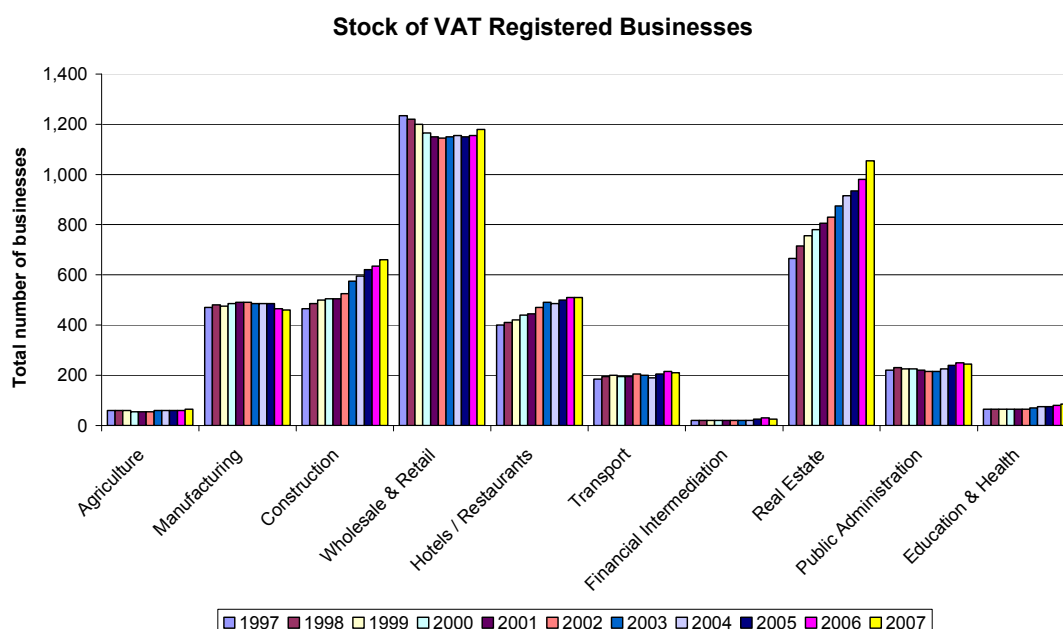
6.3 The step-change in employment sectors from the former traditional industries to a significant increase in the service industries is evident, as the workforce now is primarily employed in the public administration, education and health sectors (30%); other industries sustaining significant levels of employment are distribution, hotels and restaurants (20%), and finance, IT and other business activities (19%).

6.4 The percentage of people economically active within the city is consistently lower than regional and national levels whether in employment as an employee or self employed.¹⁹

6.5 The majority of Sunderland's workforce (78.2%) is employed in the service sector (this includes distribution, public administration and finance). However, this is still lower than both the regional and national average. Sunderland also has a higher proportion of people working in the manufacturing sector (14.9%) than both the regional (12.5%) and the national average (10.6%).²⁰

6.6 Key changes to VAT registered businesses in the city include the significant increases in construction, hotel/restaurants, and real estate, other changes include an increase in public admin and education whilst there has been a continued decline in manufacturing since 2005.

Figure 6.1



Source: Nomis

6.7 Since 2002, gross weekly pay for residents of Sunderland has consistently been lower than that of their regional and national counterparts.

¹⁹ Nomis

²⁰ Nomis

However, the percentage rise since 2002 (21%) is slightly higher than both the region (19%) and Great Britain (18%). Gross weekly pay by workplace shows that in 2008, Sunderland workers earned 2.8% more when compared to the regional workforce. However, by 2011 this had fallen to 2.5% below the regional average.

6.8 In terms of retail, Sunderland is the third largest shopping centre in the North East Region, behind Newcastle City Centre and the Metro Centre.

6.9 Sunderland City Centre is by far the largest of the service centres in the city, with Washington second and then several smaller local town and district centres. The table below indicates that there has been a reduction in floorspace in several of the smaller centres, with floorspace in Concord falling by nearly 14% and Hetton by nearly a quarter. However, the information also shows that where an increase in floorspace has taken place, the change has been quite significant. For example the City Centre grew by 16.5% and Houghton by 20% between 1993 and 2006.

6.10 There have recently been several planning applications approved for retailing in the city- all out of centre. From May to November 2011, applications totalling approximately 32,000sqm (344,000sqft) were granted permission.

Indices of Multiple Deprivation

6.11 There are 188 LSOAs in Sunderland. The overall multiple deprivation assessment places 34 (18%) LSOAs among England's 10% most disadvantaged. This continues the downward trend observed in both 2004 (27%) and 2007 (21%).

6.12 Examination of individual domains of deprivation reveals, that the Crime and the Health and Disability Deprivation domains saw substantial reductions in the numbers of LSOAs. However, Health and Disability still remains one of the most widespread areas of relative disadvantage across the city, with well over half of the city's LSOAs ranking among England's most deprived 20%.

6.13 Employment Deprivation shows a more moderate but still fairly consistent reduction in the number of Sunderland LSOAs among the two most deprived deciles in England over the period.

6.14 The most disappointing data is that of Income Deprivation, where relative change has been muted and occasionally negative.

6.15 While the incidence of multiple deprivation across Sunderland remains significantly heightened compared to England as a whole, it has shown an encouraging relative decline over the seven year period from 2004 to 2010.

Table 6.1. Summaries of IMD data for Sunderland

	2004	2007	2010
Employment deprived residents	7 th	7 th	11 th
Income deprived residents	20 th	24 th	28 th
Average score of LSOAs	22 nd	35 th	44 th
Average rank of LSOAs	22 nd	33 rd	38 th
Local extent of deprivation	23 rd	33 rd	43 rd
Local concentration of deprivation	37 th	43 rd	50 th

- 6.16 The key issue for the city with regard to this objective include:
- Unemployment in the city is rising. This may impact on residents migrating out of the city and on existing high levels of deprivation.
 - Lack of employment in the City Centre, notably office based, results in a lack of spending power and poor retail offer, and greater reliance on less sustainable locations elsewhere.
 - The number of people employed in manufacturing is falling which could lead to higher levels of unemployment
 - New jobs are being created in other sectors, some of which may not offer sustainable employment in the long term.
 - Need to further diversify economic base.
 - Need for greater geographical spread of shopping facilities to meet local needs.
 - Peripheral non-central employment locations, lead to substantial cross- town journeys.
 - Sunderland is in the top 50 authorities for all six domains of deprivation on the IMD

What will the situation be without the plan (up to 2032)?

6.17 In the short term levels of unemployment in the city are set to continue as the economic downturn gets worse, whilst those in a job may have to take a pay cut or have their pay frozen. The unemployment rate has been rising steadily across the country to 7.1% for the 3 months to March 2009, up 0.8% over the previous quarter and 1.8% over the year.

6.18 National unemployment is forecasted to rise. Average earnings short term prospects are also poor given the employment outlook.

6.19 The largest increases in VAT registrations since 1997 have been in construction and real estate. These will be affected by the current economic downturn and may fall.

6.20 Sunderland's rank in the IMD will continue to increase.

7.0 Stemming the declining population of the city by reducing out- migration and encouraging in- migration

Introduction

7.1 To reverse the trend of a declining population, there must be provision of new housing which is of the right type and tenure and which is in a suitable location and well related to employment opportunities. Existing residential environments should also be enhanced so as to retain and attract more families whilst providing for the needs of other resident citizens, including an ageing population.

7.2 The City Centre also needs to be improved, and this will not only benefit existing residents of the city but will attract others in from the surrounding area.²¹

What is the Policy Context?

- **The Sunderland Strategy** identifies that the city needs to attract newcomers if it is to reverse declining population trends, achieve the objectives of the Sunderland Strategy for the regeneration of the city, and make the optimum contribution to the region.

What are the key sustainability objectives we need to consider?

7.3 The key objectives and messages highlighted in the context review and relevant to this assessment are stemming the declining population by reducing out-migration.

What is the situation now?

7.4 The population in all Tyne and Wear districts has been declining since the early 1960's with the exception of Sunderland where the development of Washington has meant that the city continued to grow until the late 1970's.

7.5 From around the mid 1970's Sunderland's population stabilised just below the 300,000 mark before starting to decline again. By 2001 Sunderland's population had fallen to 284,600. The 2007 mid year estimate shows a further continued decline to 280,300.

²¹ Sunderland: The Challenge of the Future (Centre for Cities, January 2009)

Table 7.1: Population Change (1000's)

	1971	1981	1991	2001	2007
England	46,411.0	46,820.8	47,187.6	47,875.0	51,092.0
North East	2,678.5	2,636.2	2,587.0	2,540.1	2,564.5
Tyne & Wear	1,217.6	1,155.2	1,123.8	1,086.8	1,089.3
Gateshead	226.0	213.2	203.1	191.2	190.5
Newcastle upon Tyne	311.7	284.1	275.0	266.2	271.6
North Tyneside	208.3	198.6	195.5	192.0	196.0
South Tyneside	178.1	161.9	157.2	152.8	151.0
Sunderland	293.5	297.3	295.9	284.6	280.3

Source: ONS Population Estimates Unit

7.6 The continued decline in population in Sunderland can be attributed to several causes including the decline in traditional industries, migratory patterns and ratio of births vs. deaths.²² The data illustrates that the most acute decline in Sunderland occurs in the period 1991-2001 with a loss of 11,300 in the population of the City, rising to 15,600 for the period 1991-2007.

7.7 A large minority of the city's population are between the ages of 30 and 44 (20%) and 45-59 (20%). Table 7.3 shows the age structure of residents.²³

Table 7.2: Age of residents in Sunderland

Age Group	Number of Residents	Percentage
0-9	29,700	10.6%
10-19	36,100	12.9%
20-29	38,900	13.9%
30-39	35,800	12.8%
40-49	41,700	14.9%
50-59	36,600	13.1%
60-64	15,700	5.6%
65+	45,700	16.3%

7.8 The city's ethnic minority population rose between 1991 and 2001; however white residents still comprise 98.1% of the population, compared with a national average of 90.9%. The city's non-white population is focused in wards closest to Sunderland City Centre, with ward concentrations reflecting the England & Wales average.

7.9 Historically, there have been high levels of migration but out-migration has, in net terms, been higher- a major cause of population decline. More recent research shows that this trend continues. The net impact of all migration can be seen in figure 7.1 below. Around half the numbers of in-migrants originate from elsewhere in Tyne and Wear (with the largest number from South Tyneside and most of the remainder from Gateshead and Newcastle) or County Durham (particularly the former districts of Easington and Chester-le-Street). A further 10.1% originate from Yorkshire and the Humber (particularly West Yorkshire) and 7.7% from the North West and

²² 2007 LDF Topic Paper 15: Socio-Demographic Profile

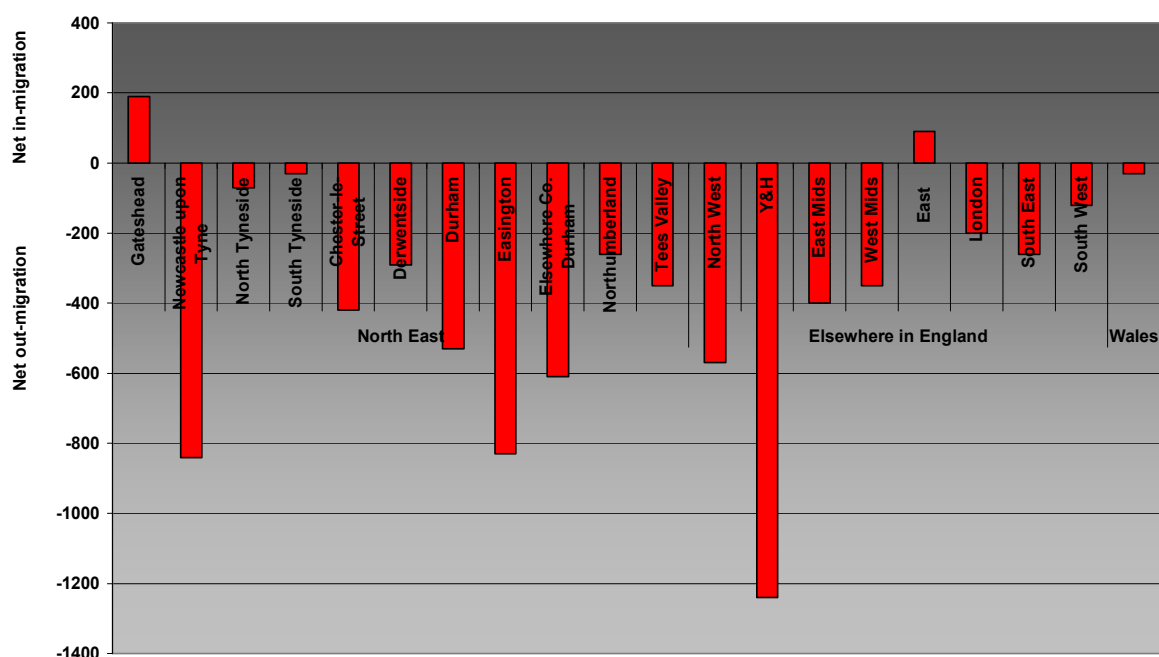
²³ 2007 Mid Year Estimates of Population

around one-quarter (24.6%) originate from non-Northern regions of England, and Wales; for instance, around 6% of in-migrants originate from London.

7.10 For out-migrants over one-third of out-migrants are moving to County Durham, in particular the adjacent former districts of Easington, Durham City and Chester-le-Street, 11.4% are moving to Newcastle There is a very limited net out-flow to neighbouring South Tyneside, with in-flows matching out-flows; 16.8% are moving to Yorkshire and the Humber, particularly West Yorkshire (e.g. Leeds).

7.11 Of particular note, during the year to June 2006, there was a considerable net out-flow of 420 residents to Easington (which represents around 35% of total net out-flow from Sunderland).

Figure 7.1: Net flows of population between Sunderland and other districts and regions July 2000 to June 2006



Source: Sunderland Strategic Housing Market Assessment

7.12 The city needs to retain as many as possible of its working-age residents, including graduates from the University and colleges; and help to attract more people to come and live in Sunderland; as well as encouraging existing residents to remain within the city. To help achieve this, the city must provide homes of the right type to attract and retain the relevant population groups.²⁴

7.13 The key issues with regard to population are:

- The continuing out-migration causing the city's population to decline.

²⁴ Sunderland Strategic Housing Market Assessment

- The projected increase of an aging population is a major issue as the demand for housing (especially specific types of dwellings) will increase and it will impact on the economy as a higher number of people will become economically inactive.

What will the situation be without the plan (up to 2032)?

7.14 Office of National Statistics projections indicate that the region's population can expect to grow by 2028.

7.15 Ageing residents will contribute further to the proportion of residents over 60 already in the city, so that by 2031 the figure is projected to be around 31%. By 2029, the proportion of residents aged 60 or over is expected to increase dramatically. The number of residents aged 85+ is expected to more than double to 8,600 by 2029. By 2029, Sunderland will have the largest number of 85+ residents compared with other Local Authority Districts in Tyne and Wear. In contrast, the proportions aged 0-19 and 0-39 is expected to decline.²⁵

7.16 When considered holistically over the period (1981 – 2031) there has been a continued decline in residents under the age of 30 (under 15, and 15 to 29). The population of the city is projected to become fairly balanced in the proportion of each age profile this has wider implications primarily focused toward sustainable economic activity.

7.17 The chart illustrates that throughout the period (1981 – 2031) the city has a rising aged population with residents aged 60+ in constituting 17.9% of the city's population in 1981 whilst projections estimate this will increase to 31.2% by 2031. In contrast the proportion of residents aged under 30 is expected to decline from 45.5% in 1981 to 32.3% in 2031.

²⁵ Sunderland Strategic Housing Market Assessment

8.0 Establishing a strong learning and skills base

Introduction

8.1 To create a city with a thriving learning culture that supports personal fulfilment is a key priority in the Sunderland Strategy. The strategy aims to ensure learning and training supports the city's economic prosperity and enables individuals to thrive in the global economy.

What is the policy Context?

- **The Sunderland Strategy** includes 'A Learning city' amongst its strategic priorities to help "create a city with a thriving learning culture that supports personal fulfilment.....ensuring learning supports the city's economic prosperity and enables individuals to thrive in the global economy'
- **The EMP** promotes the role of the University in providing key skills for an evolving economy.

What are the key sustainability objectives we need to consider?

8.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Increase skill levels and support people to gain suitable employment
- Raise general levels of education and training in the city to improve residents' employment prospects
- Raise aspirations and increase the entrepreneurialism and educational/vocational attainment of our children and young people

What is the situation now?

8.3 The percentage of pupils receiving 5 A* - C grades at GCSE level is rising steadily but is still lower than the regional and national average.

Table 8.1: GCSE Educational Attainment

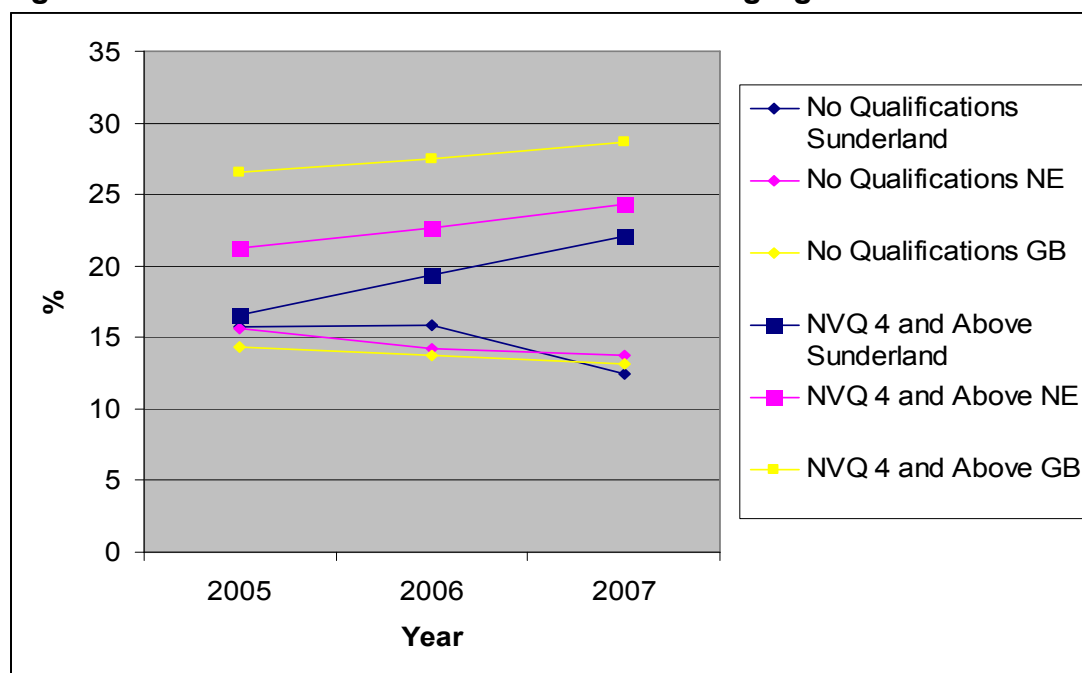
		Sep 2004 – Aug 2005(%)	Sep 2005 – Aug 2006(%)	Sep 2006 – Aug 2007(%)
Pupils achieving 5+ A* - C	Sunderland	51.5	54.9	59.4
	North East	53.5	57.3	60.6
	England	56.3	58.5	62.0
Boy pupils achieving 5+ A* - C	Sunderland	45.1	50.7	55.5
	North East	48.4	52.9	56.1
	England	51.4	53.8	57.7
Girl pupils achieving 5+ A* - C	Sunderland	58.2	59.2	63.5
	North East	58.8	61.9	65.2
	England	61.4	63.4	66.4

Source: Neighbourhood Statistics

8.4 The proportion of residents with no qualifications is at its lowest level since 2005 and for the first time is below that of the region and the country.

8.5 However, the number of residents with NVQ4 and above, although increasing at a much faster rate, is still lower than comparative levels for the region and country.

Figure 8.1: Qualifications of Residents of Working Age



Source: Nomis

8.6 The development of the higher education industry (University of Sunderland and Sunderland College) has increased at a significant level over the last decade. The University and College have key links with the city-wide economy and support a wide range of local, city region and regional businesses. The university and College are a fundamental element in supporting the economic growth of the City.

8.7 In September 2007 the university began a multi-million pound redevelopment of the City Campus. Around £75m will be spent on the City Centre site and £11m on a sports and recreation facility, which is now in part complete on Chester Road.

8.8 The University also has a corporate social responsibility statement which aims to influence the organisation's internal and external practices and their employees, customers, partners and environment in a positive manner.²⁶

8.9 In recent years the College has invested heavily in its infrastructure and learning facilities including £10million at its new campus on the old Usworth School Site in Washington. Its other main campuses include facilities at the Bede Centre, situated close to the City Centre on Durham Road,

²⁶ <http://www.sunderland.ac.uk/university/social/>

Shiney Row and the Hylton Skills Campus north of the river, which offers a £1million hospitality and catering wing and a specialist centre at Doxford International.

- 8.10 The key issue for the city with regard to this objective include:
- The number of residents of working age with qualifications equivalent to NVQ level 4 is fewer than that for the region and the country.
 - Sunderland is in the top 50 authorities for all six domains of deprivation on the IMD.

What will the situation be without the plan (up to 2032)?

8.11 The number of pupils receiving five or more A*-C GCSE passes is likely to continue as is the number of residents of working age qualified to level NVQ4 and above.

9.0 Building sustainable communities in Sunderland

Introduction

9.1 Sustainable communities are broadly defined as being places where people enjoy living and where a full range of local services and facilities is provided, helping to reduce the need to travel. Sustainable communities encompass cohesion, are mixed, safe, socially inclusive, meet a diverse range of needs, are sensitive to their environment and contribute to a high quality of life through being well planned, designed, built and run.

What is the Policy Context?

- **PPS1** stresses that the government is committed to developing strong, vibrant and sustainable communities and to bring jobs and prosperity for all. Planning authorities should ensure that the necessary infrastructure and services are provided to support new and existing economic development and housing.
- **PPS 1 and PPS 3** both emphasise that housing developments should be in suitable locations which offer a good range of community facilities and good access to jobs, key services and infrastructure. New housing should also be easily accessible and well-connected to public transport. PPG Note 13 Transport also supports this.
- **Manual for Streets** (Department for Transport, 2007) aims to assist in the creation of high quality residential streets that builds and strengthen communities and creates safe and attractive places.
- **The Sunderland Strategy** aims to ensure that everyone in the city and those wanting to come to Sunderland should have the opportunity of a decent home at a price they can afford, in a place in which they want to live and work, and to be part of safe, strong, diverse, healthy and sustainable communities.
- **The Sunderland Centre for Cities Report** (2009) recognises that the city has not participated in the recent country-wide rebirth of city centres and that parts of the city centre are run down or underutilised, and the area is lacking in modern work, retail and living space.

What are the key sustainability objectives we need to consider?

9.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Reduce crime and the fear of crime
- Promote sustainable communities
- Ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live
- Achieve a better mix of housing size, type and tenure within high quality living environments

What is the situation now?

Housing

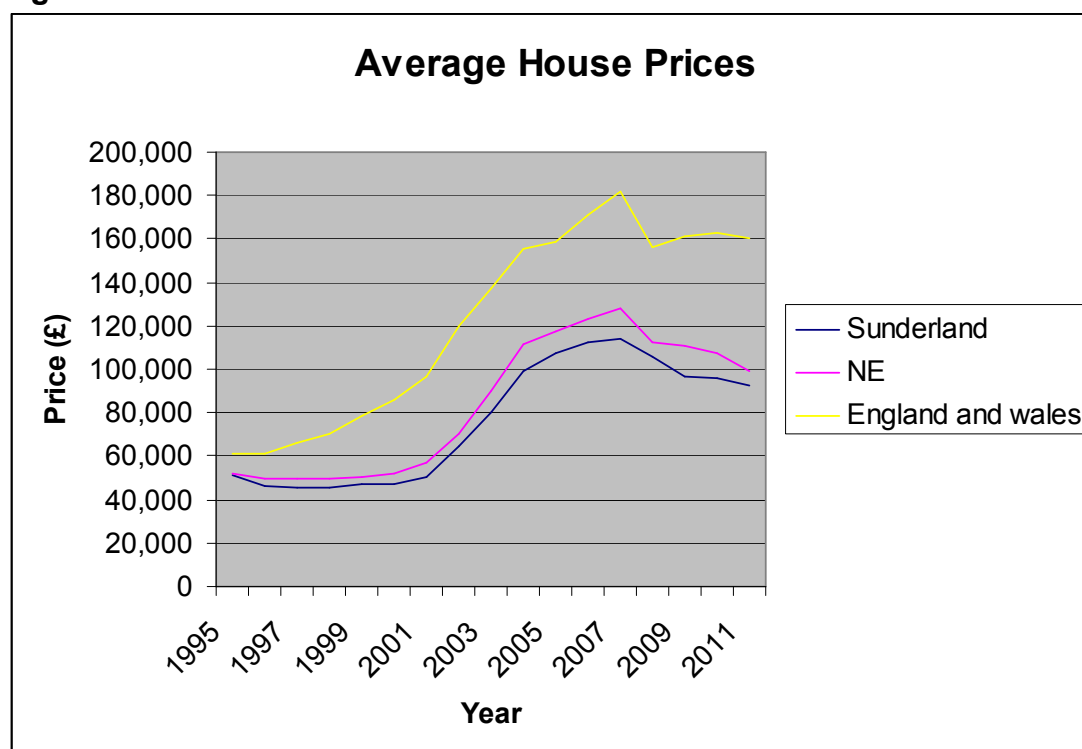
9.3 The majority of dwellings in Sunderland are concentrated in the lower council tax bands. Nearly 90% of homes are in council tax bands A, B and C. This is 5% higher than the regional average and nearly 25% higher than the national average.

9.4 There is a lack of executive and high value family housing in the city. Properties in council tax bands G and H account for just 0.5% of all homes in the City; less than half of the regional average and much lower than the national average of 4%²⁷. The availability of the type of housing available is linked to the out-migration of the city's residents.

9.5 Since 2004 house building rates have been relatively high, however the number of net additions to the city's housing stock has have been low primarily due to the demolition of poor quality and low-demand, 'obsolete' stock. This demolition has been largely within the social rented sector, namely Gentoo's (formerly the Sunderland Housing Group), renewal programme.

9.6 After a prolonged period of increasing house prices in Sunderland, reflecting wider regional and national trends, house prices since 2008 have fallen in the city. Although fluctuating nationally, they have fallen approximately within the region by 23% and in the city by 19% between December 2008 and December 2011.

Figure 9.1: House Prices in Sunderland



Source: Land Registry Custom Reports

²⁷ www.neighbourhood.statistics.gov.uk,

Crime

9.7 In 2006/07, 42.19 crimes were committed per 1000 of the population. This had fallen to 35.89 in 2007/08. However, as figures were still above the Forcewide figures of 38.56 and 33.48 respectively. The detection rate had also increased by 3.4%, but again was lower than the Forcewide average.²⁸

9.8 The latest data for Sunderland (April 2010 to January 2011) shows that many types of crime have fallen, some significantly. For example vehicle crime fell by 27%, violent crime was down by 7% and criminal damage was down by 16%. However, some crime also rose with the main increases in sexual offences up 15% and burglary from a dwelling up 10%.²⁹

City Centre

9.9 Too much of the city centre is still occupied by unrealised regeneration sites, and the symbolic Vaux Brewery Site, the key to any vision of Sunderland re-born, has now been vacant for over a decade.³⁰

9.10 Lack of progress in re-inventing the city centre has contributed to a dispersal of investment and economic activity away from the urban hub, and a leakage of jobs, spending and entrepreneurship into other markets within the region.³¹

9.11 The key issues, problems and constraints for the city with regards to sustainable communities are:

- Lack of employment in the City Centre, notably office based, results in a lack of spending power and poor retail offer, and greater reliance on less sustainable employment locations elsewhere.
- The lack of significant employment opportunities, notably office based, in the city centre, one of the most sustainably accessible locations in the city, may mean that more people have to use their own car to travel to places of work that are peripheral to the city. Again, this has knock on effects for air quality, health and the withdrawal of public transport services.
- A lack of attractive environments in the city and particularly the poor image of the City Centre have also been shown to adversely impact on migration.
- A lack of housing choice is seen as driving people out of the city. This needs to be addressed to help curb the continued decline of the city's population. This is exacerbated by the number of empty properties in the city.
- The provision of affordable homes is consistently low and there is a lack of executive and high value housing in the city; A balance needs to be struck between delivering the housing required by middle- to higher-income groups and the more affordable housing required by lower income groups.

²⁸ Northumbria Police Forcewide Summary of Crime

²⁹ Northumbria Police Crime Statistics available at <http://www.northumbria.police.uk/about%5Fus/targets%5Fand%5Fperformance/>

³⁰ Sunderland: The Challenge for the Future (Centre for Cities, January 2009)

³¹ Sunderland: The Challenge for the Future (Centre for Cities, January 2009)

What will the situation be without the plan (up to 2032)?

9.12 Crime levels are likely to fall whilst levels of detection will increase. However, this may partly be because economic activity rates in the city has been rising whilst, unemployment has been falling. In the recession this may change.

9.13 Although the above data shows that the average house price in Sunderland has been rising every year since 1996, in the short term at least, this is unlikely to continue as more recent monthly data indicates that house prices have fallen in Sunderland due to the economic downturn. This is not just a local trend but also a national one.

9.14 Analysis demonstrates that older people (headed by someone aged 60 or over) prefer to stay in their own home with aids to help them to remain independent. If they choose to move their option is to move into another house, a bungalow, sheltered accommodation or an apartment. Therefore with an ageing population, there may be more demand for bungalows and other types of accommodation for older people in the city such as 'extra care' accommodation.

10.0 Improving health and well being whilst reducing inequalities in health

Introduction

10.1 Although average life expectancy in the city is increasing, a gap still remains between that of the city when compared to the region and country. The Sunderland Strategy aims to create a city where everyone can be supported to make healthy lifestyle choices and which provides excellent health services for all who need them.

What is the Policy Context?

10.2 PPG 17, Planning for open space and recreation states that “open spaces, sport and recreation all underpin people's quality of life. Well designed and implemented planning policies for open space, sport and recreation are therefore fundamental to delivering broader Government objectives”. These objectives include supporting urban renaissance and urban renewal, promotion of social inclusion and community cohesion, and health and well being.

10.3 The Sunderland Strategy has the vision that Sunderland will be a “welcoming, internationally recognised city where people have the opportunity to fulfil their aspirations for a healthy, safe and prosperous future”. The strategy includes ‘Sunderland: A healthy city’ amongst its strategic priorities.

What are the key sustainability objectives we need to consider?

10.4 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Everyone should be supported to make healthy life and lifestyle choices
- Health plays a vital role in the development of strong, vibrant and sustainable communities including the need to provide good access to health facilities, to create healthy and attractive places to live, and to promote health and well-being by making provision for physical activity.
- Ensure that existing and proposed open space promotes health and well being

What is the situation now?

10.5 Sunderland has a three tier approach to health care. The primary tier is focussed on Sunderland Royal Hospital, located on Chester Road. This is supported by smaller second tier Primary Care Centres that are being developed within centres at Bunny Hill, Sandhill View and Washington, with another to be developed at Houghton-le-Spring. These will be further supported by a number of upgraded and existing doctor's surgeries across the city.

10.6 Sixty of the city's 188 Super Output Areas- containing 30.7% of its population were ranked amongst the 10% most health deprived nationally in the 2010 Indices of Multiple Deprivation. Over 56% of the city's population are ranked as being in the top 20% most deprived nationally ³².

10.7 Life expectancy for men in Sunderland is 75.6 years and for women 80.2³³ (2007). Both of these have risen over the past twenty years indicating that health conditions are continuing to improve in the city. However, they are still less than the average regional and national life expectancy figures.

10.8 There are a significantly higher proportion of residents within the city with limiting long-term illness (24.1%) compared to the England & Wales average (18.1%). However since 2000, deaths in the city due to coronary heart disease or cancer have fallen by 35% and 18% respectively.³⁴

10.9 In 2001, 64% of the population described its health as good whilst 23% described it as fairly good. The remaining 13% described their health as not good.

10.10 Almost 11% of Sunderland residents of working age were claiming incapacity Benefits in August 2008. This was above the regional average of 9.7% and the GB average of 7.0%.³⁵

10.11 In 2003-2007 Sunderland achieved Healthy City designated status from the World Health Organisation. The accolade is not based on current level of health in the local authority area; rather it represents the acknowledgement by city authorities that health is a primary issue and their commitment to addressing issues related to poor health through initiatives such as Healthy Urban Planning and Health Impact Assessment.

10.12 More than 50% of the city is greenspace, consisting of statutorily designated Green Belt, and open space. The table below, taken from the Open Space register, details the amount of coverage of the city by type of green space as a % value.

³² Index of Multiple Deprivation 2010

³³ Office of National Statistics

³⁴ 2001 Census Data

³⁵ Office of National Statistics

Table 10.1 – Types of Greenspace

Type of Coverage	Amount of Coverage
Parks and gardens	3.5%
Natural and semi natural green space including woodland	5.2%
Outdoor sports facilities (not including school facilities)	3.4%
Cemeteries and disused churchyards	0.06%
Accessible countryside in the urban fringe	32.8%
Amenity green space	5.4%
Green corridors	Not defined
Provision for children and young people	118 sites currently
Allotments	104 Council sites
Coast and river	10km (coast) and 13km (river) approx

10.13 To date, the city has achieved the Council's current minimum standard of 2.0 ha per 1000 population for amenity open space laid down in 1983.

What will the situation be without the plan (up to 2032)?

10.14 It is reasonable to think that the health of the population of Sunderland will continue to improve alongside national trends. The city's commitment to health related objectives and status as a Healthy City may also see an improvement in health related indicators that could improve its overall performance in regards to health and life expectancy relative to the other parts of England and Wales.

10.15 A Greenspace Audit is currently being undertaken for the city and is expected to be completed in 2012. This will form the basis for a Green Infrastructure Strategy for the city. This strategy will indicate whether or not the city meets the Accessible Natural Greenspace Standards for towns and cities (ANGST), which identifies areas where the resident population do not have adequate access to greenspace.

11.0 Promoting, enhancing and respecting Sunderland's culture and heritage

Introduction

11.1 The historic environment of the city is a rich and diverse resource that warrants every effort being made to sustain it. Heritage sites and assets enrich the city's culture and benefit the city's communities. The historic environment encompasses ancient archaeological sites such as the Neolithic round barrow at Seven Sisters, Copt Hill; early Christian relics – most notably St. Peter's Church; some medieval structures and remains including Hylton Castle and Chapel; and a rich legacy of sites, buildings and monuments from the industrial revolution onwards.

11.2 The historic environment can also make up an integral part of the city's Green Infrastructure and assist with the Governments Place Making Agenda helping to create locally distinctive neighbourhoods.

What is the Policy Context?

- **The Ancient Monuments and Archaeological Areas Act 1979** made provision for the investigation, preservation and recording of matters of archaeological or historical interest.
- **The Planning (Listed Buildings and Conservation Areas) Act 1990** relates to special controls in respect of buildings and areas of special architectural or historic interest. The Act requires local authorities to designate areas of "special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance" as Conservation Areas and from time to time to formulate and publish proposals for their preservation and enhancement.
- **PPS5, Planning for the Historic Environment**, states that the Government's overarching aim is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations.
- **The European Landscape Convention** promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues.
- **Natural England's Countryside Character** (Volume 1: North East) identifies landscapes and aims to raise awareness of the diversity of countryside character, increase the understanding of what contributes to that character and what may influence it in the future.

What are the key sustainability objectives we need to consider?

11.3 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- The full potential of the historic environment should be realised and it should be accessible to all.

- There should be effective protection for all aspects of the historic environment
- Protect and enhance the features of the city's urban heritage and landscapes, with restoration and creation where appropriate.

What is the situation now?

11.4 There are no inscribed World Heritage Sites within the city at present, but there is a candidate site in Sunderland. St. Peter's, a 7th century church, is one half of the Wearmouth - Jarrow monastery, the other half being St. Paul's Church in Jarrow – one monastery in two places. The twinned monastery was the creation of Benedict Biscop, who founded the monastery in the late 7th century. The theologian and historian, Bede, was a renowned member of the community from 680- 735 AD. The City Council has submitted the site to the Department for Culture, Media and Sport for inscription, with a decision to be made later this year.

11.5 The city is home to nine Scheduled Ancient Monuments and 692 Listed Buildings³⁶. This includes 9 Grade I Listed Buildings and 16 Grade II* Listed Buildings. The remainder are listed at Grade II.

11.6 Sunderland has two historic parks on the national Register of Parks and Gardens of Historic Interest, which is compiled by English Heritage. Mowbray Park is in the city centre and includes a number of Grade II listed structures, including fountains, memorials, statues and a footbridge. Roker Park is the focal point of the Roker Park Conservation Area and includes a Grade II listed bandstand and a drinking fountain.

11.7 There are currently six structures on the national English Heritage "Heritage At Risk Register", an increase of two structures since 2010. There are also two conservation areas and two scheduled monuments on the At Risk Register- the same as in 2010.

11.8 Of the city's 14 conservation areas, 11 currently have character appraisals and management strategies adopted as formal planning guidance.

What will the situation be without the plan (up to 2032)?

11.9 It is anticipated that all existing conservation areas will have an adopted character appraisal and management strategy; subsequently the council intends to begin reviewing the earlier documents, embarking upon a 5-year review cycle. It is also likely that the council will begin to consider new areas for designation as conservation areas.

11.10 The number of structures on the 2009 Heritage at Risk Register has increased since the last register was undertaken in 2008.

³⁶ State of the Historic Environment Report 2009, 2nd Edition

12.0 Developing sustainable transport and communication

Introduction

12.1 Sustainable transport is integral to the wider sustainable development agenda. An efficient transport network is a pre-requisite of a successful, modern economy. A safe and accessible transport network helps fulfil social objectives, while a low-pollution transport network is essential to safeguard the environment and climate.

What is the Policy Context?

- **PPS1** aims to provide improved access for all to a range of services and facilities, by ensuring that new development is located where it is easily accessible for all on foot, bicycle or public transport and not just having to rely on access by car.
- **PPG13 Transport** states that quality of life depends upon transport and easy access to jobs, shopping, leisure facilities and services. PPG13 aims to promote more sustainable transport choices for both people and moving freight; promote accessibility to jobs and services by public transport, walking and cycling; and reduce the need to travel, especially by car. The guidance also recognises the role of walking and cycling in reducing air pollution.
- **The Tyne & Wear Local Transport Plan** provides a strategic response to the spatial and transport patterns of the area, reflecting the policy objectives of the five local authorities in Tyne and Wear and the Passenger Transport Authority.
- **The Sunderland Strategy** aims to improve transport links between residential and employment areas whilst minimising traffic congestion.

What are the key sustainability objectives we need to consider?

12.2 The key objectives and messages highlighted in the context review and relevant to this assessment are:

- Provide improved access for all by ensuring that new development is located where everyone can access services or facilities on foot, bicycle or public transport.
- Design and implement efficient and sustainable pattern of movement and communication, which will enable people to have a higher quality of life.
- Improve transport links between residential and employment areas minimising traffic congestion.

What is the situation now?

12.3 Bus patronage in Tyne and Wear has fallen by 44% since 1986; leading to various service reductions.³⁷ This trend has reversed from 2006/07 to 2008/09 when the introduction of free concessionary travel for disabled and

³⁷ Sunderland City Council Sustainable Neighbourhoods Index

older people led to an increase in patronage. Metro patronage has grown 2% over the last year and passenger numbers have risen above 40 million across the network for the first time in 16 years. Metro is now the most reliable train operator in Britain, running 95.57% of trains on time during 2007/08.³⁸

Table 12.1: Public Transport Patronage in Sunderland

Year	Bus	Metro	Rail
2006/07	32,831,160	2,677,850	690,372
2007/08	32,887,986	2,603,732	672,716
2008/09	34,537,986	2,655,806	N/A

SOURCE: Business Intelligence Department, Nexus, 2008

* Excludes South Tyneside stations that are part of the Sunderland Metro Extension at Fellgate, Brockley Whins & East Boldon

** Rail patronage is based on boarding's on the Sunderland to Newcastle Northern Rail service

12.4 Car ownership levels in Sunderland are increasing at a faster rate than the national average. Road traffic has grown by 11% between 2000 and 2006 and is expected to continue to grow at about 2% per year.³⁹ This is likely to exacerbate problems of congestion, air pollution and carbon emissions.

12.5 Cycle levels within Tyne and Wear have increased significantly- 17% between 2004-2007. There are now nearly 100 km of designated cycle routes in the city with more than 80km off-road.⁴⁰

12.6 The key issues for the city with regard to transportation are:

- The majority of transport schemes identified in the Unitary Development Plan have not been programmed.
- Rising car ownership figures indicate that congestion especially along key corridors such as the A183 and A690 will increase.
- Rising car use may further impact upon public transport, forcing costs of public transport use up and reducing patronage levels again.
- Rising car use will worsen safety and environmental conditions for walking and cycling (perceived or actual).
- The creation and improvement of walking and cycling networks.

What will the situation be without the plan (up to 2032)?

12.7 The trend for rising car ownership and resulting congestion is likely to continue according to forecasted growth outlined in the Tyne and Wear Local Transport Plan 2.

12.8 Bus usage is likely to increase and this may also be the case for the Metro. However, significant investment in rail may be required in order for the decline in patronage to be reversed. Levels of cycling in the city, and the amount of designated cycle routes, are also likely to increase.

³⁸ Tyne and Wear Local Transport Plan Progress Report 2006-2011

³⁹ Tyne and Wear Local Transport Plan

⁴⁰ Tyne and Wear Local Transport Plan 2

13.0 Summary of Assessment

13.1 The completed appraisal matrices can be found in Appendix 1. A summary of the findings of the appraisal emerging Core Strategy policies can be found in table 13.1.

Table 13.1: Summary of Core Strategy policies

CS1
The policy aims to direct development to the most sustainable and easily accessible areas- Central Area and Sunderland South. This will also help to ensure that the use of previously developed land is maximised, helping to ensure that green infrastructure across the city is protected. However, housing led regeneration in the coalfield could mean more residents there travelling out for work. As a key provider for employment land, Washington will help grow the city's economy.
CS2
Prioritising the City Centre for office development and retail, will mean that the most intensive uses are located in the most sustainable location but could also lead to more congestion. However, the amount of land proposed for economic development could potentially have a detrimental impact on the green infrastructure and biodiversity within the city. The policy is likely to have a positive impact on the city's economy and population. Emphasis is given to enhancing training and learning so as to enhance opportunities for securing new employment.
CS3
The amount of housing proposed could potentially have a negative impact on green infrastructure and biodiversity in the city. By bringing empty properties back into use and supporting renewal programmes, the city's residential environment will improve. Along with the provision of affordable and executive dwellings, there will be an increase in population.
CS4
By supporting an integrated approach to transport and land use planning and focusing and intensifying development in accessible built-up areas, encouraging a reduction in trip distances and supporting of trips by public transport, walking and cycling, carbon emissions in the city will be reduced. However, the implementation of the various transport schemes will have mixed effects on emissions. The SSTC will have lead to an increase in emissions whilst the Metro and the improvement of arterial routes would lead to an increase in usage and reduction in emissions. Focussing development in accessible locations and the development of public transport and walking and cycling routes, will help to will ensure that air quality does not deteriorate. There will also be an improvement in the economy and residents health.
CS5
The establishment of green infrastructure in would ensure that biodiversity in the city is enhanced and designated sites are protected and aims to protect the broad extent of the Green Belt. The establishment of green infrastructure would increase access to green and open space which would help promote sport and exercise. The policy respects the city's local heritage and historic environment by preserving and enhancing those parts of the built environment

that make a positive contribution to local character, that establish a distinctive sense of place and which represent the unique qualities of Sunderland.
CS6
By achieving resource efficiency and high environmental standards in new development there will be a reduction in carbon emissions. The policy provides a broad framework for assessing the risks of flooding and ensures that water quality will be maintained.
CS7
By applying the waste hierarchy, the policy will help to reduce waste production and increase recycling. But by developing a network of small scale local waste management facilities could increase traffic congestion in these areas.
CS8
The policy would not minimise the use of global and local resources by continuing to extracting minerals and could lead to an increase in congestion and detrimental impact on the city's landscape. However, Mineral safeguarding areas would ensure that resources are available for the future and ensure that no development is permitted which could cause unnecessary sterilisation by development. The processes involved in extracting minerals could help to develop appropriate employment opportunities that are accessible and diverse and attractive to residents and potential in-migrants.
CS9
The policy will boost the city's economy by helping to create a "University City" and creating an Investment Corridor. This will also help make the city more attractive to residents and in-migrants leading to an increase in the population. By supporting the continued development of the University of Sunderland, opportunities would be created to improve educational attainment and skills and qualifications for the working age population. The plan supports digital connectivity by supporting high tech and knowledge based sectors.
CS10
The development of the Ryhope to Doxford Link Road will lead to an increase in emissions and deteriorating air quality but will reduce traffic congestion on existing routes. Development in Sunderland South will also maximise the use of previously developed land in the city. Green infrastructure corridors will be protected including the Durham Heritage Coast. These will help to enhance biodiversity. By supporting the renewal of housing areas and identifying Hendon and the East End as a regeneration area, there will be an improvement in the city's residential environment.
CS11
Promoting the development of the seafront could lead to the deterioration of quality of the bathing beaches and biodiversity, potentially impacting on SSSI's, at Seaburn and Roker due to increased visitor numbers. The creation of an Investment Corridor and the ongoing development of the tourism sector in the area could help boost the city's economy.
CS12
By supporting the potential expansion of existing wind energy, there will be an increase in the amount of energy produced by renewable energy. By accommodating a significant proportion of the city's new employment land along with Enterprise Zone (part of the Investment Corridor), there will be a

boost to the city's economy and help make the area more attractive to local residents and potential in-migrants. The policy also aims to protect the distinct identity of Washington New Town and aims to ensure that development does not impact on the rural character of the north bank of the River Wear.

CS13

By supporting the renewal of housing areas and identifying Hetton Downs/ Eppleton as a regeneration area, there will be an improvement in the city's residential environment. The policy aims to promote and preserve the distinct identity and cultural heritage of the Coalfield and aims to protect agricultural land in the Magnesian Limestone Escarpment from inappropriate development.

14.0 Strategic sites

14.1 This section provides the appraisal of the two Core Strategy Strategic Sites:

- North of Nissan;
- Vaux, Farringdon Row and Galleys Gill;

LAND NORTH OF NISSAN (Policy CS12)

14.2 It is envisaged that the site will be developed as a strategic employment site with an emphasis on development which supports low carbon technologies.

What is the policy context?

14.3 The UDP deposit document (1997) proposed a site to the North of Nissan for employment purposes. However, this was not supported by the Inspector at the Public Local Inquiry and so did not feature in the Adopted Plan. The site was then brought forward in the Regional Planning Guidance for the North East (2002), which proposed a strategic employment site in this broad location, between 40 and 200 hectares, to be identified by Sunderland, South Tyneside and Gateshead Councils working collaboratively.

14.4 The Regional Spatial Strategy Submission Draft (June 2005) proposed for the site, now entitled TyneWear Park, to be identified. However, the Secretary of States Proposed Changes (May 2007) led to the removal of the site from RSS. This site now proposed is the City Council's preferred site due to a number of factors including its proximity to the Nissan; access to the Leamside Line; and that there is no other site of a similar scale available.

What's the situation now and what will be the likely situation without the plan?

14.5 The site currently lies within the Green Belt in the north-east corner of Washington. The site would remain Green Belt, if the plan did not propose a change of use.

Table 14.1: What will the situation be with the plan?

	North of Nissan
Climate Change	Presently there is limited public transport infrastructure. Therefore its development could lead to an increase in greenhouse gas emissions as private and commercial vehicles access the area.
Environmental Limits	Manufacturing of goods on the site would lead to an increase in waste. Due to the lack of public transport to the site, the majority of users would be using their cars to access the site and this would lead to worsening air quality.
Environmental Infrastructure	The site is currently within in the city's Green Belt and any development would lead to a worsening in the site's biodiversity potential.
Economy and Employment	The site would be developed as a strategic employment site for the city, accommodating major employers. This

Market	<p>would lead to an increase in economically active residents, tackle deprivation, and strengthen the city's economic performance. As emphasis would be given to developments supporting low carbon technology, the city's economy would become increasingly diversified. Businesses would be encouraged to link in with office development in the city centre, thereby enhancing its role and influence.</p> <p>As a key site in the production of the electric vehicles, the site would also be developed in light of the city's recent designation as a Low Carbon Economic Area, further strengthening the city's economy.</p>
Population	<p>The site would lead to the development of employment opportunities which would be diverse, plentiful and attractive to local residents and potential in-migrants. However, as the site has poor public transport links, it may not be accessible to all.</p>
Learning and Skills	<p>The development of the site with an emphasis on low carbon technologies may present opportunities for the learning of new skills for residents in the city.</p>
Sustainable Communities	<p>The site is currently limited by public transport and is a greenfield, Green Belt site. The policy states that the site should be of a high standard of design and should incorporate a high standard of landscaping due to its prominent location.</p>
Health and Well-Being	<p>No significant impact</p>
Culture and Heritage	<p>The development of the site for an exemplar, low carbon business area would improve the image of the city.</p>
Transport and Communication	<p>The development of the site would lead to an increase in congestion due to limited public transport links and increased business traffic using the site.</p>
Mitigation/ Enhancement Measures	<p>Future businesses at the site could ensure that a shuttle bus is arranged for workers from major public transport hubs or encourage workers to car share by having a proportion of car share only parking bays. This would help reduce emissions, ensure that air quality does not deteriorate significantly, increase accessibility to the site and reduce congestion. As a major site, a travel plan must also be developed. If development is to have an emphasis on low carbon industry, there may be potential to have electric car charging points or cars. Access to the Leamside Line will also help reduce emissions.</p> <p>As it is supporting low carbon technologies, a higher level of building control standards in this respect could be applied.</p>

VAUX, FARRINGDON ROW AND GALLEYS GILL (CS9)

14.6 It is envisaged that the Vaux Brewery site will be developed as an employment-led mixed use development whilst Farringdon Row will be developed for offices. Galleys Gill will remain as open space.

What is the policy context?

14.7 The site is the location of the former Vaux Brewery and was allocated in the UDP (1998) to be continued for this purpose. However, after its closure, UDP Alteration Number 2 (2007) allocated the site, along with Farringdon Row adjacent, for business led mixed use development, whilst retained Galleys Gill as open space. A development framework has been published for Farringdon Row and Vaux has been granted permission for mixed use development.

What's the situation now and what will be the likely situation without the plan?

14.8 The brewery closed in 1998 and the built structures have been cleared for several years. The site is owned by Tesco Stores Ltd. Sunderland Arc and its partners are currently in formal negotiations to acquire the land and have also undertaken a comprehensive programme of land assembly and remediation at Farringdon Row. Without the plan, the site is likely to come forward, however, may take considerably longer to be developed.

Table 14.2: What will the situation be with the plan?

	Vaux, Farringdon Row and Galleys Gill
Climate Change	The site is located within the city centre, and is highly accessible by public transport. Although, some users would continue to use their private vehicles, there would be a high number of users accessing the site through various means including the metro and bus. As housing is also proposed on the site, workers may also be residents. Any housing development would need to move towards zero carbon energy supply. A small part of the site may be vulnerable to surface water flooding.
Environmental Limits	Residential and office development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Development of the site would mean that previously developed land in Sunderland South is also maximised. Development of the site could potentially have a detrimental impact on the water quality of the River Wear due to the proximity of the site to the river, a possible increase in surface water run off and more waste.
Environmental Infrastructure	The plan would ensure that Galleys Gill is maintained as open space which would ensure that its biodiversity potential is maintained or enhanced. The site's location on the River Wear could have an adverse impact on biodiversity due to its location adjacent to a Local Wildlife

	Sites in Galleys Gill. The River Wear is also home to a range of biodiversity.
Economy and Employment Market	The development of high density office development, and the major expansion of the office market in the city centre, would lead to an increase in its role and influence. Development would also strengthen the city's economic performance through the creation of more jobs and the office market would represent the diversification of the city's economy and the growth of new business sectors.
Population	The development of the site, in a key location in the city centre, would enhance the perception of the city centre. The proposed offices would lead to accessible, plentiful jobs which are attractive to current and potential residents. Housing development would incorporate an element of affordable and executive.
Learning and Skills	No significant impact
Sustainable Communities	The location is one of the most sustainable locations in the city as it is based within the city centre and is highly accessible by public transport. Housing, including affordable, would also be provided on site. Development would link well with public transport and shops and is in close proximity to the city's hospitals and schools.
Health and Well-Being	The maintenance of Galleys Gill as open space would mean that development of the site would ensure there is provision to safe, green and open space for activity.
Culture and Heritage	Development of this prominent site would improve the image of not only the city centre but also the city. Any development is likely to improve local environmental quality.
Transport and Communication	Although a proportion of users would access the car by private vehicle, development of the site, due to its accessibility, would promote the use of sustainable transport and transport routes that connect well with housing, employment. The mixed use nature of the site would reduce reliance on the car and encourage walking.
Mitigation/ Enhancement Measures	<p>Development of the site could take account of the heritage and cultural fabric of the previous use which was a longstanding part of Sunderland's industrial legacy.</p> <p>The plan already ensures that development does not have an adverse effect on water quality in the River Wear. This plan ensures that designated sites are protected throughout the city, which will help mitigate any impacts on the adjacent Local Wildlife Sites.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding. As a major development a travel plan will be required. Combined heat and power could also be used on site.</p>

Conclusions

14.9 The appraisal has shown that the Strategic Site at Vaux, Farrington Row and Galleys Gill would contribute positively to sustainable development objectives in order to satisfy the requirements of the Core Strategy.

14.10 The Strategic Site at Land North of Nissan has shown several uncertainties in terms of performance against environmental SA objectives. The mitigation measure proposed however should ensure that some of these concerns are tackled in an appropriate manner.

14.11 It should be noted that during the preparation of UDP Alteration Number 2 (Central Sunderland), the site at Vaux was the subject of SA. Any development framework produced in the future for the site will also be subject to SA.

Table 14.3: Key

Significant positive impact
Positive impact
Neutral impact, or rough balance of positive and negative effects
Unclear impact, or no data available
Impact could be positive or negative depending on implementation of the DPD
Negative effect
Significant negative effect

Table 14.4: Strategic Sites Summary of Impacts

	Land North of Nissan	Vaux, Farrington Row and Galleys Gill
Climate Change		
Environmental Limits		
Environmental Infrastructure		
Economy and Employment Market		
Population		
Learning and Skills		
Sustainable Communities		
Health and Well-Being		
Culture and Heritage		
Transport and Communication		

15.0 Locations for major development

15.1 This section provides the appraisal of the thirteen Core Strategy Locations for Major Development (LMD).

CENTRAL AREA SITES

HOLMESIDE TRIANGLE (CS9.2)

15.2 It is envisaged that the site will be developed for mixed uses including retailing.

What is the policy context?

15.3 The site was in the UDP (1998) under two separate allocations with an emphasis on shopping, offices, services, food and drink and leisure. However, UDP Alteration Number 2 (2007) allocated it for retail, housing and leisure. The site is also the subject of a development framework.

What's the situation now and what will be the likely situation without the plan?

15.4 The site is in multiple ownership (75% in Public ownership) and some parts are currently vacant. Without the plan, this site may still come forward but may take considerably longer to develop.

Table 15.1: What will the situation be with the plan?

	Holmeside Triangle
Climate Change	Developing the Holmeside Triangle for mixed uses including retailing, would attract users to the area. As the city centre is the most accessible and sustainable location in the city, some residents may use public transport to access the site. This would mean that fewer cars are travelling to large shopping facilities out of the city or in less sustainable locations across the city. Some of the site may also be vulnerable to surface water flooding.
Environmental Limits	Development of the site would mean that use of previously developed land in Sunderland South is maximised.
Environmental Infrastructure	No significant impact
Economy and Employment Market	The Holmeside Triangle is a key site within the city centre and its development would enhance the centre's role and influence. As the site is a location for new retailing in the city, new jobs would be created, which would strengthen the Sunderland's economic performance and tackle one of the causes of deprivation in the city.
Population	The perception of the city centre would be enhanced as the Holmeside Triangle is in a key location/ gateway. Employment opportunities would also be created in the city which may be attractive to local residents but may fail to

	attract new in-migrants into the city as the jobs will generally be lower paid retail jobs which people are unwilling to move into the city for.
Learning and Skills	No significant impact
Sustainable Communities	The location is one of the most sustainable locations in the city centre as it is based within the city centre and is highly accessible by public transport as it is adjacent to Park Lane bus and metro interchange.
Health and Well-Being	No significant impact
Culture and Heritage	Development of this prominent site would improve the image of not only the city centre but also the city.
Transport and Communication	The site's development is likely to promote the use of sustainable transport as it is in a highly accessible, sustainable location adjacent to Park Lane bus interchange and Metro station.
Mitigation/ Enhancement Measures	Sustainable drainage systems in the plan policies will help to mitigate against flooding.

CROWTREE LEISURE CENTRE (CS9.2)

15.5 It is envisaged that the site will be developed for comparison and convenience retailing.

What is the policy context?

15.6 UDP Alteration Number 2 (2007) placed the site in the City Centre Retail Core.

What's the situation now and what will be the likely situation without the plan?

15.7 The site is currently used as a leisure centre. It is envisaged that leisure facilities will be relocated to Stadium Village. Without the plan, this site may still come forward but may take considerably longer to develop.

Table 15.2: What will the situation be with the plan?

	Crowtree Leisure Centre
Climate Change	<p>By developing the Crowtree Leisure Centre for retailing, the city centre would house large shopping facilities which would attract users into the area. As the city centre is the most accessible and sustainable location in the city, some residents may use public transport to access the site. This would mean that fewer cars are travelling to large shopping facilities out of the city or in less sustainable locations across the city.</p> <p>The site is currently used as a leisure centre. This is a major attractor of people into the city centre. It is envisaged that all large scale leisure facilities in the city would be re-allocated to Stadium Village.</p>
Environmental Limits	Development of the site would mean that use of previously developed land in Sunderland South is maximised.
Environmental Infrastructure	No significant impact
Economy and Employment Market	The Crowtree Leisure Centre is a key site within the city centre and its development would enhance the centres role and influence. As the site is a location for new retailing in the city, new jobs would be created, which would strengthen the Sunderland's economic performance and tackle one of the causes of deprivation in the city.
Population	The perception of the city centre would be enhanced as the Crowtree Leisure Centre is in a key location. Employment opportunities would also be created in the city which may be attractive to local residents but may fail to attract new in-migrants into the city as the jobs will generally be lower paid retail jobs which people are unwilling to move into the city for.
Learning and Skills	No significant impact.
Sustainable	The location is one of the most sustainable locations in the

Communities	city centre as it is based within the city centre and is highly accessible by public transport as it is close to both Park Lane bus and metro interchange and the Central Railway Station.
Health and Well-Being	Although replacement facilities could come forward at Stadium Village (alongside the Aquatic Centre), the closure of the current leisure centre may increase health inequality as some residents may have to travel further which may include an extra bus or metro. This could increase costs.
Culture and Heritage	Development of this prominent site would improve the image of the city centre.
Transport and Communication	The site's development is likely to promote the use of sustainable transport as it is in a highly accessible, sustainable location adjacent to Park Lane bus interchange and Metro station and Central Station.
Mitigation/ Enhancement Measures	None identified

SUNNISIDE (CS9.2)

15.8 Development in the area is already taking place with an emphasis on historic regeneration. It is envisaged that any future development will be focussed towards housing, leisure and business use.

What is the policy context?

15.9 Sunnyside was allocated in the UDP for business class uses. Alteration Number 2 allocated the site for a range of uses to promote the area as a mixed use urban quarter. The site is also the subject of a development framework.

What's the situation now and what will be the likely situation without the plan?

15.10 The area is starting to develop as a mixed use quarter, with a focus on economic and historic regeneration. Without the plan, the area would be maintained for office uses. The plan ensures that the area is promoted for a vital and viable mix of uses.

Table 15.3: What will the situation be with the plan?

	Sunnyside
Climate Change	As a mixed use urban quarter, with people working, living and shopping in the area, it is likely that users would not be dependent on private vehicles, leading to a reduction on emissions. Any housing would have to move towards zero carbon in energy supplies.
Environmental Limits	Residential and office development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Development of the site would mean that previously developed land in Sunderland South is also maximised.
Environmental Infrastructure	Green infrastructure has, and would continue to be an important element in the development leading to enhanced biodiversity.
Economy and Employment Market	Office development would lead to job creation, leading to the city's economy being strengthened. Regeneration of the area would boost the local economy and enhance the economic role and influence of the city centre.
Population	The perception of the city centre would be enhanced due to the regeneration of the area. Business and residential development would lead to employment opportunities and an element of affordable and executive housing.
Learning and Skills	No significant impact
Sustainable Communities	The location is one of the most sustainable locations in the city as it is based within the city centre and is highly accessible by public transport. Housing, including affordable, would also be provided on site. Development would link well with public transport and shops and is in

	close proximity to the city's hospitals and schools.
Health and Well-Being	As a mixed use urban quarter, with facilities in close proximity, the design of the area would promote the opportunities for recreation in everyday life.
Culture and Heritage	The image of the city, and in particularly the city centre, would be greatly improved with the regeneration of the area, which would also promote sustainable tourism. The regeneration of the area would take into account its status as a conservation area and development would respect local heritage.
Transport and Communication	Development of the site would promote the use of sustainable transport due to its location in the city centre and proximity to bus and Metro facilities. The development of a mixed use urban quarter may help to increase levels of walking and cycling. Due to its accessibility, development would also promote the use of sustainable transport and transport routes that connect well with housing, employment.
Mitigation/ Enhancement Measures	None identified

STADIUM VILLAGE (CS9.2)

15.11 It is envisaged that the site will be developed for leisure uses with an element of housing and business.

What is the policy context?

15.12 Stadium Village comprises two sites, Sheepfolds and Stadium Park, and was allocated under two different policies in the UDP. The first allocated Sheepfolds for business use classes, whilst Stadium Park, then Wearmouth Colliery, was allocated primarily for leisure.

15.13 Under Alteration Number 2 the sites continued to be made up of the two sites. Stadium Park was allocated for leisure use whilst Sheepfolds was allocated for housing and business. The site is also the subject of a development framework.

What's the situation now and what will be the likely situation without the plan?

15.14 The Stadium of Light and the Aquatic Centre are currently on site. Large footplate leisure uses will continue to be developed. However, without the plan, development may still come forward but could take considerably longer to develop.

Table 15.4: What will the situation be with the plan?

	Stadium Village
Climate Change	Limited parking on site means fewer people using private vehicles to access facilities. The site is also accessible by the Metro and bus. Both these would ensure that sustainable modes of transport are used leading to a reduction in emissions. Any housing would be moving towards zero carbon energy supply. The site is also susceptible to surface water flooding.
Environmental Limits	Development of the site would mean that previously developed land is maximised. Development of the site could potentially have a detrimental impact on the water quality of the River Wear due to the proximity of the site to the river, a possible increase in surface water run off and more waste.
Environmental Infrastructure	The site's location on the River Wear could have an adverse impact on biodiversity.
Economy and Employment Market	Leisure related uses, and any office development, would lead to jobs being created, tackling the causes of deprivation and increasing the number of economically active people in Sunderland. The growth of leisure facilities would help to diversify the economy.
Population	Development of the site could enhance the city centre as the site is adjacent to a key gateway into the centre from Sunderland North and would create accessible and diverse jobs which would be attractive to local residents. Jobs in

	the leisure industry may not be attractive to potential in-migrants and may not be plentiful as, although developments are usually large scale they are relatively low in job density. Housing development would incorporate an element of affordable and executive.
Learning and Skills	No significant impact
Sustainable Communities	As the site is accessible by various means and close to the city centre, it is in a sustainable location. Some housing on site would be expected to be affordable and due to its location, in proximity to the city centre, would be accessible to a wide range of services.
Health and Well-Being	Leisure related uses would improve the health of residents of Sunderland and the north east and will help to decrease the causes of ill health. As home to the only Olympic size swimming pool in the north east, Stadium Village attracts many people from across the region. Its location means it is highly accessible and reduces health inequality.
Culture and Heritage	The development of the site would lead to the image of the city and city centre to be enhanced as it is in a key location and adjacent to a key gateway into the city centre from Sunderland North. Visitors to the Stadium of Light would also see an improved area. The site promotes sustainable tourism as it's is accessible by various means of transport including the bus and Metro.
Transport and Communication	As it is accessible by public transport the site would reduce congestion in the city. Limited car parking on site promotes the use of sustainable transport. Its location means that housing, employment and the city centre are easily accessible.
Mitigation/ Enhancement Measures	<p>The plan already ensures that development does not have an adverse effect on water quality in the River Wear.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p>

BONNERSFIELD (CS9.2)

15.15 A large part of the site has already been developed for educational uses whilst it is envisaged that the remainder of the site will be developed for housing.

What is the policy context?

15.16 Bonnersfield was allocated in the UDP for B class uses whilst Alteration Number 2 allocated the land for housing and education and training use.

What's the situation now and what will be the likely situation without the plan?

15.17 The site currently consists of St Peters campus and housing. Without the plan, it is expected that the site would not be developed.

Table 15.5: What will the situation be with the plan?

	Bonnersfield
Climate Change	<p>The site's location and accessibility would mean that users are likely to use public transport. Limited parking on site, and as the majority of users may be students and may not have access to a private vehicle, would ensure greenhouse gas emissions are reduced.</p> <p>Some of the site is also at risk of surface water flooding.</p>
Environmental Limits	<p>Development of the site would mean that previously developed land in the city is maximised.</p> <p>Development of the site could potentially have a detrimental impact on the water quality of the River Wear due to the proximity of the site to the river, a possible increase in surface water run off and more waste.</p>
Environmental Infrastructure	<p>The site's location on the River Wear could have an adverse impact on biodiversity.</p>
Economy and Employment Market	<p>Development of the site for educational use would lead to job creation and strengthen the city's economy. The development of the university would lead to diversification of the economy. The St Peters campus would also have linkages with the city's Chester Road campus, enhancing the economic role of the city centre.</p>
Population	<p>The site's location would increase the perception of the city centre, and its development, for educational use and the University, would lead to accessible, diverse, plentiful and attractive jobs for local residents and potential in-migrants. Housing development would incorporate an element of affordable and executive.</p>
Learning and Skills	<p>Development of the site for the University and educational related uses would help to improve educational attainment across the city and the qualifications and skills of the working age population.</p>

Sustainable Communities	As the site is accessible by various means and close to the city centre, it is in a sustainable location. Some housing on site would be expected to be affordable and due to its location, in proximity to the city centre, would be accessible to a wide range of services.
Health and Well-Being	No significant impact
Culture and Heritage	The site is adjacent to the candidate World Heritage Site and any inappropriate development at Bonnersfield may affect views of it, and its setting.
Transport and Communication	The site's location and accessibility would ensure that sustainable forms of transport are promoted. The University of Sunderland also plays a key role in the digital connectivity of the city and initiatives like Software City.
Mitigation/ Enhancement Measures	<p>The plan already ensures that development does not have a detrimental effect on the candidate World Heritage Site and its buffer zone.</p> <p>Affects on biodiversity will be mitigated through plan policies.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p>

SOUTH SUNDERLAND

THE PORT OF SUNDERLAND (CS10.2)

15.18 It is envisaged that the Port will be developed for employment uses.

What is the policy context?

15.19 The UDP states that the Port will be protected for port-related developments and activities whilst Alteration Number 2 supported the redevelopment of land surplus to Port requirements within the wider area of the Port for employment generating uses. The Economic Masterplan highlights the potential role of the Port in renewable energy industries.

What's the situation now and what will be the likely situation without the plan?

15.20 The site is currently used for port related economic development. Without the plan, development may still come forward but could take considerably longer to develop.

Table 15.6: What will the situation be with the plan?

	The Port
Climate Change	<p>Development of the Port for renewable energy, including manufacturing and location of renewable technologies, would lead to a reduction in carbon emission.</p> <p>There is a high risk of tidal flooding along the Port. Large areas of the Port are also susceptible to surface water flooding.</p> <p>As access to the site is mainly through private vehicles there may be an increase in greenhouse gas emissions. However, the site is also accessible by rail which may help to reduce congestion and therefore emissions.</p>
Environmental Limits	<p>Development of the site would mean that previously developed land in Sunderland South is maximised. However, more traffic would lead to worsening air quality and development could detrimentally affect water quality in the River Wear.</p>
Environmental Infrastructure	<p>The site's location on the River Wear, and in close proximity to the city's Natura 2000 sites, could mean that development could have an adverse impact on biodiversity.</p> <p>The Coast, including the Heritage Coast, is also a key part of the city's green infrastructure and any development could negatively impact on both.</p>
Economy and Employment Market	<p>The development of the Port for related economic development purposes and renewable energy manufacturing may be attractive to current residents and potential in-migrants.</p>

Population	Development of the site would lead to accessible, diverse, plentiful jobs being created. These would be attractive to current residents and potential in-migrants.
Learning and Skills	The manufacturing of new renewable technologies may present opportunities for the learning of new skills for residents in the city.
Sustainable Communities	No significant impact
Health and Well-Being	No significant impact
Culture and Heritage	Development of the site may have a negative impact on the Durham Heritage Coast.
Transport and Communication	Access to the Port is mainly through private vehicles. The development of the port for related economic development purposes and renewable energy manufacturing would lead to an increase in congestion, in particular, freight using the site, although there is rail access to the site. Development of the SSTC and the Port Access Road would also lead to an increase in congestion.
Mitigation/ Enhancement Measures	<p>The plan ensures that green infrastructure is established, and protected, across the city. This includes the Coast as a key green corridor. The plan already ensures that development does not have an adverse effect on water quality in the River Wear.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding. The Port should not be considered for housing where alternative sites are available.</p> <p>Development should link in with the future flood risk management strategy for the coastal defences.</p>

PALLION YARD (CS10.2)

15.21 It is envisaged that the site will be developed primarily for business (B1, B2 and B8), with some housing and assembly and leisure, in particularly a marina (D2).

What is the policy context?

15.22 The site is allocated as employment land in the Adopted UDP, whilst Alteration Number 2 allocates the land for business use classes with a range of other uses. The site is also a key location adjacent to the proposed Sunderland Strategic Transport Corridor (SSTC).

What's the situation now and what will be the likely situation without the plan?

15.23 The site has not been developed. Without the plan, this site may still come forward but may take considerably longer to develop and possibly after the duration of the plan.

Table 15.7: What will the situation be with the plan?

	Pallion Yard
Climate Change	<p>Development may lead to an increase in carbon emissions as the site attracts more users. However, the site has good public transport links and this may encourage potential users to use more sustainable forms of transport.</p> <p>Any housing would be moving towards zero carbon energy supply.</p> <p>A small area of the site is within flood zone 3a and some of the site may also be susceptible to flooding.</p>
Environmental Limits	<p>Development of the site would mean that previously developed land in Sunderland South is also maximised.</p> <p>Development could also potentially have a detrimental impact on the water quality of the River Wear due to a possible increase in surface water run off and more waste.</p> <p>Due to more cars accessing the site, air quality would worsen.</p>
Environmental Infrastructure	<p>The site's location on the River Wear could have an adverse impact on biodiversity.</p>
Economy and Employment Market	<p>As the site is to be developed primarily for business use classes, regeneration of the site would strengthen the city's economic performance and to increase the number of economically active people in the city. With more people working this would help to tackle deprivation in the city.</p> <p>Due to its proximity and potential transport and business linkages to the City Centre, development would enhance the economic role and influence of the centre.</p>

Population	As the site will be adjacent to the new River Wear crossing, which will be a key gateway to the City Centre, development of the site will help to enhance the perception of the centre. Employment uses, and a marina, will provide employment opportunities which would be attractive to local residents and potential in-migrants.
Learning and Skills	No significant impact
Sustainable Communities	As the site is accessible by various means it is in a sustainable location. Some housing on site would be expected to be affordable and due to its location, in proximity to the city centre, would be accessible to a wide range of services.
Health and Well-Being	No significant impact
Culture and Heritage	The site, a shipbuilding yard, is adjacent to a key gateway to the city centre and redevelopment of the site will help to improve the image of not only the city but also the city centre.
Transport and Communication	The site is well served by public transport but its location, adjacent the Queen Alexandra Bridge and in close proximity to the new river crossing, may mean that the site is more attractive to people using private vehicles rather than the bus. This would lead to an increase in congestion in the city.
Mitigation/ Enhancement Measures	<p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p> <p>Any development will also have to be subject to a travel plan to help with the projected increase in traffic. This would also help with issues relating to climate change, air quality and congestion.</p>

GROVES (CS10.3)

15.24 It is envisaged that the site will be developed for housing and employment.

What is the policy context?

15.25 The site is allocated as employment land in the Adopted UDP, whilst Alteration Number 2 allocates the land for a sustainable mixed use residential community comprising mainly of housing, with some business use and a local centre. The site is also a key location adjacent to the proposed Sunderland Strategic Transport Corridor (SSTC).

What's the situation now and what will be the likely situation without the plan?

15.26 The site has not been developed. Without the plan, this site may still come forward but may take considerably longer to develop.

Table 15.8: What will the situation be with the plan?

	Groves
Climate Change	<p>By developing a mixed use residential community with housing, business and local facilities, carbon emissions would be reduced as people may work, live and shop on site reducing the need to travel by car.</p> <p>Some of the site could also be susceptible to surface water flooding.</p>
Environmental Limits	<p>Residential and office development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Development of the site would mean that previously developed land in Sunderland South is also maximised.</p> <p>Development of the site could potentially have a detrimental impact on the water quality of the River Wear due to the proximity of the site to the river, a possible increase in surface water run off and more waste.</p>
Environmental Infrastructure	<p>The site's location on the River Wear could have an adverse impact on biodiversity.</p>
Economy and Employment Market	<p>Business development on the site would lead to an increase in economically active people in the city and strengthen Sunderland's economic performance.</p>
Population	<p>Appropriate employment opportunities would be developed that are accessible, diverse and attractive to local residents and potential in-migrants. There would also be a mix of housing provided on the site including affordable and executive.</p>
Learning and Skills	<p>No significant impact</p>
Sustainable	<p>As the site would be developed as a mixed use residential</p>

Communities	community, and is accessible by public transport, including the Metro, the site is a sustainable location. A mix of housing, including affordable, would be provided which is accessible by public transport to schools, hospitals, shops and other facilities.
Health and Well-Being	The promotion of the site as a mixed use community would lead to exercise and opportunities for physical activity in everyday life as the use of walking and cycling would be promoted.
Culture and Heritage	The site is a large one (33 hectares) and any new development would improve the image of the city, especially as it would be a key gateway into Central Sunderland due to the location of the SSTC.
Transport and Communication	Development would reduce traffic congestion in the city as residents may work and shop in site. Its location next to a Metro station, and a potential new station, make the site highly accessible and ensure the site links well with other uses and the city centre. The development of a mixed use community would reduce reliance on the car due to the distribution of land uses and would help to increase walking and cycling.
Mitigation/ Enhancement Measures	<p>The plan already ensures that development does not have an adverse effect on water quality in the River Wear.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p>

CHERRY KNOWLE (CS10.3)

15.27 It is envisaged that the site will be developed for housing and health facilities.

What is the policy context?

15.28 Cherry Knowle is a hospital in Ryhope in Sunderland South and was allocated in the UDP for housing and a hospital.

What's the situation now and what will be the likely situation without the plan?

15.29 The site is currently a hospital. Without the plan, development may still come forward but could take considerably longer to develop. The site is also the subject of a development framework.

Table 15.9: What will the situation be with the plan?

	Cherry Knowle
Climate Change	Development would lead to an increase in carbon emissions due to an influx of residents and increasing car use. All homes developed would move towards zero carbon. The site is located in flood zone 1 and the latest data indicates that a very small percentage is at risk of surface water flooding.
Environmental Limits	Residential development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Due to an increase in car use, air quality in the area would deteriorate.
Environmental Infrastructure	No significant impact
Economy and Employment Market	No significant impact
Population	The site would provide a choice of housing to meet the needs of current residents and potential in-migrants.
Learning and Skills	No significant impact
Sustainable Communities	Ryhope has relatively good public transport access. Development would lead to the provision of high quality housing, including an element of affordable, accessible to a range of services.
Health and Well-Being	Health facilities are proposed on site, increasing access to local healthcare facilities and reducing health inequality.
Culture and Heritage	No significant impact
Transport and Communication	Development would lead to an increase in congestion due to an increase in the population and car usage. The site connects well with existing facilities.

Mitigation/ Enhancement Measures	<p>The development of the site should propose opportunities to increase levels of walking and cycling, within the estate, by for example having a small local centre with shops and facilities on site. As a major development, a travel plan would also have to be submitted.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p>
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SOUTH RYHOPE (CS10.3)

15.30 It is envisaged that the site will be developed for residential use along with some employment use.

What is the policy context?

15.31 This site was allocated under the UDP as a 20 hectare employment site.

What's the situation now and what will be the likely situation without the plan?

15.32 Although allocated for some time, the site has not been developed. The 2012 Employment Land Update recommends that it be released from its employment allocation. Without the plan, the site may not come forward as envisaged.

Table 15.10: What will the situation be with the plan?

	South Ryhope
Climate Change	Development of the site would lead to an increase in carbon emissions as the site would lead to an increase in residents using roads in the area. The site is located in flood zone 1 and the latest data indicates that a very small percentage is at risk of surface water flooding.
Environmental Limits	More traffic in the area would lead to deterioration in air quality.
Environmental Infrastructure	The site is a greenfield site and its development would lead to it not being a part of the city's green infrastructure. This could have a detrimental impact on the biodiversity potential of the site.
Economy and Employment Market	Development of part of the site for employment use would assist in job creation.
Population	Development of the site would help to provide a choice of housing in the city including affordable and executive.
Learning and Skills	No significant impact
Sustainable Communities	Whilst the site is greenfield it is within the urban area in the conurbation and has good public transport links. Its development will mean that high quality, affordable housing is developed with accessible transport and services.
Health and Well-Being	Development of the site would mean that there is less green space for activity.
Culture and Heritage	Development of this large Greenfield site will need to be carefully designed so as not to have a detrimental impact on the city's landscape.
Transport and	Development of the site would lead to an increase in

Communication	vehicles accessing the area. However, the site is relatively easy accessible by public transport and this could lead to potential residents using sustainable modes of transport.
Mitigation/ Enhancement Measures	<p>Any development of the site should ensure that it incorporates green space on site to contribute to the city's green infrastructure.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding.</p>

BURDON LANE (CS10.3)

15.33 It is envisaged that the site will be developed for housing.

What is the policy context?

15.34 The site is not allocated in the UDP. It comprises an area of open land providing separation between parts of the built up area.

What's the situation now and what will be the likely situation without the plan?

15.35 The site remains undeveloped. Without the plan, this would continue.

Table 15.11: What will the situation be with the plan?

	Burdon Lane
Climate Change	Development would lead to an increase in carbon emissions due to an influx of residents and increasing car use. All homes developed would move towards zero carbon.
Environmental Limits	Residential development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Due to an increase in car use, air quality in the area would deteriorate.
Environmental Infrastructure	The site is a greenfield site and its allocation for housing would lead to it not being a part of the city's green infrastructure. This could have a detrimental impact on the biodiversity potential of the site. The site (as part of the UDP) is also part of a wildlife corridor. Again this would have a detrimental impact on biodiversity.
Economy and Employment Market	No significant impact
Population	The site would provide a choice of housing to meet the needs of current residents and potential in-migrants. An element of executive and affordable housing is likely to be developed on site.
Learning and Skills	No significant impact
Sustainable Communities	The site is not currently in a sustainable location. However, the development of this LMD is likely to lead to a safe and inclusive, well planned and well designed community. An element of affordable housing is likely to be provided on site as are the creation of some services.
Health and Well-Being	Development of the site would mean that there is less green space for activity.
Culture and Heritage	Development of this site will have a detrimental impact on the city's landscape.
Transport and Communication	Development would lead to an increase in congestion due to an increase in the population and car usage.
Mitigation/ Enhancement	Development of the site would need to mitigate against the impacts on biodiversity. This could take the form of

Measures	<p>greenspace or potentially a small informal nature reserve.</p> <p>Developers could ensure that the site is served by good public transport (primarily a bus route but also cycle routes). This would help to reduce reliance on the car, leading to reduced carbon emissions, maintain good air quality and help to relieve congestion. Other mitigation measures could include providing key community facilities on site to make it more sustainable, including open space for activity.</p>
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CHAPELGARTH (CS10.3)

15.36 It is envisaged that the site will be developed for housing.

What is the policy context?

15.37 The site is allocated for housing in the UDP.

What's the situation now and what will be the likely situation without the plan?

15.38 The site has not been developed and without the plan this would continue.

Table 15.12: What will the situation be with the plan?

	Chapelgarth
Climate Change	Development would lead to an increase in carbon emissions due to an influx of residents and increasing car use. All homes developed would move towards zero carbon.
Environmental Limits	Residential development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Due to an increase in car use, air quality in the area would deteriorate.
Environmental Infrastructure	The site is a greenfield site and its allocation for housing would lead to it not being a part of the city's green infrastructure. This could have a detrimental impact on the biodiversity potential of the site.
Economy and Employment Market	No significant impact
Population	The site would provide a choice of housing to meet the needs of current residents and potential in-migrants. An element of executive and affordable housing is likely to be developed on site.
Learning and Skills	No significant impact
Sustainable Communities	The site is not currently in a sustainable location. However, the development of this LMD is likely to lead to a safe and inclusive, well planned and well designed community. An element of affordable housing is likely to be provided on site as are the creation of some services.
Health and Well-Being	Development of the site would mean that there is less green space for activity.
Culture and Heritage	Development of this site will have a detrimental impact on the city's landscape.
Transport and Communication	Development would lead to an increase in congestion due to an increase in the population and car usage.
Mitigation/ Enhancement Measures	Through Section 106 agreements/ Community Infrastructure Levy, developers could ensure that the site is served by good public transport (primarily a bus route but also cycle routes). This would help to reduce reliance

	<p>on the car, leading to reduced carbon emissions, maintain good air quality and help to relieve congestion. Other mitigation measures could include providing key community facilities on site to make it more sustainable, including open space for activity.</p>
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COALFIELD

PHILADELPHIA (CS13.3)

15.39 It is envisaged that the site will be developed for housing.

What is the policy context?

15.40 The site is allocated for employment purposes in the UDP. However, the Employment Land Review (2009) recommended the partial release of the site from this allocation. This is confirmed in the 2012 Update of this document.

What's the situation now and what will be the likely situation without the plan?

15.41 The site is currently significantly underused as an industrial estate. Without the plan this is likely to continue.

Table 15.13: What will the situation be with the plan?

	Philadelphia
Climate Change	Development would lead to an increase in carbon emissions due to an influx of residents and increasing car use. All homes developed would move towards zero carbon.
Environmental Limits	Residential development on the site would lead to an increase in waste. However, recycling facilities would be provided to households by the City Council to ensure recycling levels increase. Due to an increase in car use, air quality in the area would deteriorate. Development of the site would also lead to the redevelopment of previously developed land. Previous uses on the site may also mean that some land has been contaminated- redevelopment would mean that, this land would be reclaimed and become harmless and safe to use.
Environmental Infrastructure	No significant impact
Economy and Employment Market	No significant impact
Population	The site would provide a choice of housing to meet the needs of current residents and potential in-migrants. An element of executive and affordable housing is likely to be developed on site.
Learning and Skills	No significant impact
Sustainable Communities	The site is in a sustainable location as it is already served by public transport and has access to local services and facilities. An element of affordable housing is likely to be provided on site.
Health and Well-Being	No significant impact

Culture and Heritage	Developer contributions could include enhancing the listed buildings on the site.
Transport and Communication	Development would lead to an increase in congestion due to an increase in the population and car usage. However, the area is already served by public transport.
Mitigation/ Enhancement Measures	Through Section 106 agreements/ Community Infrastructure Levy, developers could ensure that the site is served by good public transport (primarily a bus route but also cycle routes). This would help to reduce reliance on the car, leading to reduced carbon emissions, maintain good air quality and help to relieve congestion.

Conclusions

15.42 The appraisal shows that the ongoing development of Stadium Village, Bonnersfield, Sunnyside, Holmeside and Crowtree would contribute positively to sustainable development objectives.

15.43 The development of The Port and Pallion could have a detrimental impact on climate change and the environment, and along with Groves, could impact negatively on biodiversity.

15.44 The development of South Ryhope, Cherry Knowle, Burdon Lane and Chapelgarth will have a positive impact in terms of population only. However, the latter two sites score poorly in terms of the appraisal and mitigation measures will need to be put in place.

15.45 It should be noted that sites at Groves, Pallion and the sites in the Central Area have all undergone SA during the preparation of UDP Alteration Number 2 (Central Sunderland). Sites which have been the subject of development frameworks would have been the subject of further SA. It is expected that development frameworks for all sites will be prepared in the near future and further SA work will be undertaken.

Table 15.14(1): Locations for Major Development Summary of Impacts

	Stadium Village	Bonnarsfield	Sunniside	The Port	Pallion Yard	Holmeside
Climate Change						
Environmental Limits						
Environmental Infrastructure						
Economy and Employment Market						
Population						
Learning and Skills						
Sustainable Communities						
Health and Well-Being						
Culture and Heritage						
Transport and Communication						

Table 15.14(2): Locations for Major Development Summary of Impacts

	Crowtree	Groves	Cherry Knowle	South Ryhope	Burdon Lane	Chapelgarth	Philadelphia
Climate Change							
Environmental Limits							
Environmental Infrastructure							
Economy and Employment Market							
Population							
Learning and Skills							
Sustainable Communities							
Health and Well-Being							
Culture and Heritage							
Transport and Communication							

16.0 Local regeneration areas

16.1 This section provides the appraisal of the four Core Strategy Local Regeneration Areas for Regeneration.

HOUGHTON TOWN CENTRE (CS13.3)

16.2 It is envisaged that the town centre will be developed for main town centre uses with an emphasis on retailing.

What is the policy context?

16.3 The area consists of several allocations in the UDP regarding the regeneration, and retail potential, of the centre

What's the situation now and what will be the likely situation without the plan?

16.4 Houghton town centre has seen a decline in its retail function. It has a limited convenience and comparison retail sector and is characterised by a high vacancy rate, a low level of footfall, limited operator demand and, in part, by a relatively poor environment. Without intervention from the plan this would continue to be the case.

Table 16.1: What will the situation be with the plan?

	Houghton Town Centre
Climate Change	The development of retail facilities in the town centre would lead to a reduction in carbon emissions as more residents would use public transport to access the site rather than using their cars to travel to other parts of the city, and region, for their shopping needs.
Environmental Limits	Through regeneration and environmental improvements to the town centre, more visitors would be attracted to use its facilities. Although public transport is available, use of private vehicles is likely to increase leading to a deterioration in air quality.
Environmental Infrastructure	No significant impact
Economy and Employment Market	The number of economically active people would increase as jobs in retail are likely to be created. This would also help tackle one of the main causes of deprivation in the city.
Population	Jobs in retail would be created and these may be attractive to current residents but are unlikely to bring potential in-migrants into the city.
Learning and Skills	No significant impact
Sustainable Communities	Houghton Town Centre is in a sustainable location and is easily accessible by bus.
Health and Well-Being	No significant impact
Culture and	Development of the town centre, including environmental

Heritage	improvements, would have a positive effect on the image of the city.
Transport and Communication	Congestion may increase as the regeneration of the town centre may attract more visitors. However, the area is also easily accessible by bus and therefore promotes the use of sustainable transport.
Mitigation/ Enhancement Measures	Regeneration of the area and environmental improvements should incorporate an element of open space to ensure opportunities for recreation and enhance biodiversity in the area.

HETTON DOWNS/ EPPLETON (CS13.3)

16.5 It is envisaged that the area will be the subject to housing led regeneration.

What is the policy context?

16.6 The UDP outlines housing improvements to the area. An Area Action Plan (AAP), including an SA, is coordinating development in the area as part of the council's response to the urgent need for a programme of housing renewal in the area following the findings of a city-wide Housing Stock Condition Survey that identified the area as containing some of the worst housing in the city.

What's the situation now and what will be the likely situation without the plan?

16.7 The housing stock is currently in poor condition, and it is around this issue that the area has become the subject of an AAP. Due to surrounding issues, development in accordance with the AAP would occur but would take considerably longer.

Table 16.2: What will the situation be with the plan?

	Hetton Down/ Eppleton
Climate Change	Housing renewal in the area would ensure that improvements would lead to better conditions, including energy efficiency, and would move towards zero carbon energy supply. Carbon emissions would also be reduced as the poor quality of current housing would be upgraded.
Environmental Limits	No significant impact
Environmental Infrastructure	Significant investment is envisaged for landscaping which would contribute to green infrastructure in the city and would enhance the biodiversity potential of the city. Intensive planting of tree belts and woodland using native species is also to be undertaken further contributing to wildlife.
Economy and Employment Market	No significant impact
Population	The residential environment of the area would be significantly improved due to housing renewal and demolition.
Learning and Skills	No significant impact
Sustainable Communities	One of the key objectives for the AAP is to design out crime in the area. Housing renewal, including demolition and rebuild, would ensure a well planned and well designed community. Community facilities, including support for retailing in the area, and public transport are accessible to housing.
Health and	Landscaping in the area would contribute to green

Well-Being	infrastructure leading to increased access to open space for activity.
Culture and Heritage	Residential improvements to the area would lead to a enhanced image of the city.
Transport and Communication	No significant impact
Mitigation/ Enhancement Measures	None identified at this level. The AAP and its SA, will detail proposals further and propose mitigation/ enhancement measures.

SEABURN AND ROKER SEAFRONT (CS11.2)

16.8 It is envisaged that the area will be regenerated and build on its heritage and natural environment.

What is the policy context?

16.9 The area consists of several allocations in the UDP, primarily regarding the regeneration of the seafront in terms of leisure and tourism. The area is also subject to a Masterplan, including an SA and Appropriate Assessment, which is currently being produced. More information on the impacts of development on the city's SAC and SPA can be found here.

What's the situation now and what will be the likely situation without the plan?

16.10 The seafront is a former seaside resort in need of regeneration. Without the plan, development would still continue but without a strategic, citywide focus.

Table 16.3: What will the situation be with the plan?

	Seaburn and Roker Seafront
Climate Change	Due to its location by the sea, development could be affected by flood risk as some of the area is in flood zone 3a.
Environmental Limits	Development of the area could have a negative impact on bathing waters in the area.
Environmental Infrastructure	The seafront is in close proximity to nature conservation sites and a SPA. The individual unit which makes up the SPA is also designated as a site of special scientific interest. Any development could impact on the biodiversity of the area, including the sites mentioned.
Economy and Employment Market	Regeneration of the area would attract more tourists and boost the local economy through diversification, through tourism, employing local people and strengthening the area's economic performance.
Population	The regeneration of the area will improve the city's residential environment and may help to provide employment and housing opportunities.
Learning and Skills	No significant impact
Sustainable Communities	The regeneration of the seafront will help to ensure that the development is undertaken in such a way that it is well planned and well designed.
Health and Well-Being	Improving the image of the coast would lead to more people using the area and its open space facilities.
Culture and Heritage	The coast is an important part of Sunderland's heritage and any improvements would lead to an improvement in the image of the city and promote sustainable tourism to the city.
Transport and Communication	The area has a Metro station nearby, allowing users to access it via public transport, and a tourist trail may lead to

	increasing levels of walking and cycling. However, at peak times there may be an increase in congestion.
Mitigation/ Enhancement Measures	<p>Regeneration of the area should take not have a detrimental effect on the city's Natura 2000 sites or bathing waters. The Masterplan and its SA, will detail proposals further and propose further mitigation/ enhancement measures.</p> <p>Green infrastructure and sustainable drainage systems in the plan policies will help to mitigate against flooding. Development should link in with the future flood risk management strategy for the coastal defences</p>

HENDON AND THE EAST END (CS10.3)

16.11 It is envisaged that the area will be the subject to housing led regeneration.

What is the policy context?

16.12 The UDP identifies the area for housing renewal and environmental improvements. The area is also part of the New Deal for Communities programme.

What's the situation now and what will be the likely situation without the plan?

16.13 Without the plan, development may still come forward but could take considerably longer to develop.

Table 16.4: What will the situation be with the plan?

	Hendon and the East End
Climate Change	New housing in the area would move towards zero carbon in energy supply.
Environmental Limits	The regeneration of the area would ensure that previously developed land in Sunderland South is maximised.
Environmental Infrastructure	No significant impact
Economy and Employment Market	Regeneration of the area, including economic development, may lead to new job opportunities and help tackle one of the causes of deprivation in one of the poorest areas of the city.
Population	Housing renewal would greatly improve the residential environment of the area and its location may enhance the city centre. A mix of new housing may be provided and investment into the area may also develop appropriate employment opportunities.
Learning and Skills	No significant impact
Sustainable Communities	Through employment, housing renewal and education, crime and the fear of crime may fall. The sites location in close proximity to the city centre and good access through public transport ensures it is in a sustainable location. Housing renewal in Hendon would lead to high quality housing being built close to services.
Health and Well-Being	Housing renewal in the area should lead to improvements in health due to the link between poor quality housing and health. Renewal will lead to reductions in health inequality and help to decrease the causes of ill health in the city.
Culture and Heritage	Regeneration in the East End could focus on its heritage assets. Improvements to Hendon and the East End would lead to an improvement in the city's image.
Transport and Communication	The area's location near the city centre may promote sustainable transport.

Mitigation/ Enhancement Measures	Development should be undertaken in a sensitive manner to ensure it does not impact on the area's historic environment.
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Conclusions

16.14 The appraisal has shown that the regeneration of Houghton Town Centre will have positive economic factors but may have a negative impact on air quality.

16.15 The regeneration of Hetton Downs and Hendon and the East End will have positive socio-economic and environmental factors, whilst the regeneration of the Seaburn and Roker Seafront will have positive social and economic effects but may have a detrimental impact on the environment.

16.16 It should be noted that Hetton Downs and the Seaburn and Roker Seafront have been sustainably appraised during the preparation of an AAP and a masterplan, respectively. Further detail in terms of the appraisal and enhancement and mitigation measures can be found in the relevant reports.

Table 16.5: Local Regeneration Areas Summary of Impacts

	Houghton Town Centre	Hetton Downs/ Eppleton	Seaburn/ Roker Seafront	Hendon and the East End
Climate Change				
Environmental Limits				
Environmental Infrastructure				
Economy and Employment Market				
Population				
Learning and Skills				
Sustainable Communities				
Health and Well-Being				
Culture and Heritage				
Transport and Communication				

17.0 Conclusions

17.1 This chapter aims to bring together the main findings of the SA. Table sets out a consideration of cumulative effects in terms of Policies, Strategic Sites, Locations for Major Development and Local Regeneration Areas.

17.2 The main difficulties encountered in undertaking this appraisal relate to the appraisal of the Locations for Major Development and the Local Regeneration Areas. In relation to the Locations for Major Development this was primarily because the Core Strategy Revised Preferred Options only states broad uses for these areas and does not state the mix of uses on particular sites. In terms for the Local Regeneration Areas, the main difficulty was again lack of detail at this level.

17.3 In preparing this SA report, consideration has been given to whether there might be any cumulative and synergistic effects, as required by Annex I(f) of the SEA regulations, resulting from the SA objectives and other plans and programmes. However, these other plans and programmes have already been taken into account during the production of the scoping report and this report. Any cumulative effects have been identified in the relevant chapters and appraised as part of the revised preferred options.

Table 17.1: Cumulative and Synergistic Effects

SA Objective	Cumulative and Synergistic Effects
Adapting to and mitigating against climate change	<p>The plan would have a positive impact on climate change by focussing development for large scale town centre uses towards the city's main centres and supporting an integrated approach to transport and land use planning. Promoting sustainable modes of transport and renewable energy, including working towards zero carbon housing would also have a positive effect.</p> <p>This would be enhanced by the development of the Strategic Site at Vaux in the Central Area, and the development of LMDs at Stadium Village, Bonnersfield and Sunnyside, Holmeside and Crowtree and the Local Regeneration Areas with the exception of the seafront.</p> <p>However, the two road schemes in the plan (the SSTC and the Ryhope to Doxford Link Road), the strategic site North of Nissan, the Port, Pallion Yard, the two LMDs in Ryhope along with the LMDs at Chapelgarth, Burdon Lane and Philadelphia would have a negative effect on climate change.</p> <p>Flooding is not a major problem in the city. However, the Port and the Seaburn and Roker seafront are the areas which are at greatest risk of flooding.</p>
Living within environmental	<p>The plan aims to reduce waste production and increase recycling through applying the waste hierarchy. It also</p>

limits	<p>aims to ensure that development applies the sequential approach to development.</p> <p>The sustainable transport schemes mentioned in policy CS4 will help to prevent the deterioration of air pollution and help to prevent the designation of Air Quality Management Areas. The plan also ensures that the adverse effects of pollution are minimised in particularly on the river wear, the coast and the magnesian limestone aquifer.</p> <p>Again, the Vaux site would have a positive impact against this objective, along with the development of LMDs at Sunnyside, Holmeside, Crowtree and Philadelphia and the regeneration areas at Hetton Downs and Hendon.</p> <p>Development of the two road schemes outlined would lead to a decrease in air quality across the city, whilst the continued extraction of minerals would not minimise the use of global and local natural resources.</p> <p>Development at North of Nissan, the seafront, Houghton town centre and the LMDs at The Port, Pallion Yard, The two LMDs in Ryhope along with Chapelgarth and Burdon Lane would have a negative effect on environmental limits.</p>
Safeguarding and enhancing Sunderland's environmental infrastructure	<p>The establishment of green infrastructure would ensure that biodiversity in the city is enhanced and designated sites are protected, along with those priority habitats and species outlined in the Durham Biodiversity Action Plan. The plan aims to ensure that development does not have an adverse impact on biodiversity.</p> <p>The plan also aims to maintain the broad extent of the Green Belt.</p> <p>As the Durham Heritage Coast is a key piece of green infrastructure, it would also be protected and enhanced. However, one of the key aims of green infrastructure is to increase accessibility, along with a coastal footpath, this could have a detrimental impact on the Heritage Coast.</p> <p>Development at Vaux would have a positive impact along with Sunnyside and Hetton Downs.</p> <p>North of Nissan would have a significant negative effect on environmental infrastructure, primarily because it is currently part of the Green Belt.</p> <p>Eight of the LMDs would have a negative impact,</p>

	<p>particularly Burdon Lane and the Port which would have a significant negative impact. It is unclear how the remaining LMDs would have an impact. Development at the seafront (regeneration area) would also have a negative impact on environmental infrastructure.</p>
<p>Strengthening Sunderland's economy and employment market</p>	<p>The plan aims to protect and develop land for employment uses in the city, including through the development of a city centre office market, the creation of a "University City" and by focussing employment land in Washington. The plan also aims to accommodate over 86,000 sqm of retail floorspace.</p> <p>This will aid the diversification of the economy and would ensure that the plan has a significant positive impact on the economy and employment market.</p> <p>This would be facilitated by the development of the SSTC which would improve accessibility to key employment locations.</p> <p>Both Strategic Sites and the Local Regeneration Areas with the exception of Hetton Downs, would have a positive or significant positive impact on economy and the employment market in the city.</p> <p>The majority of LMDs would also have positive, or significant positive impact on the economy. The exception being those LMDs which will primarily be used for housing where there will be no significant impact.</p>
<p>Stemming the declining population of the city by reducing out migration and encouraging in-migration</p>	<p>The plan would improve the city's residential environment and would provide a choice of housing across the city by ensuring a mix of housing types, including affordable and executive housing, density, affordability, and supporting the renewal programmes of Gentoo and other Registered Social Landlords.</p> <p>The perception of the city centre would be enhanced as the plan outlines that the Central Area, including the city centre, would be a priority for regeneration.</p> <p>The plan could also help to develop appropriate employment opportunities that are accessible as employment land will be distributed across the five sub-areas.</p> <p>All the Strategic Site, LMD and Regeneration Area policies will have a positive effect on population in the city.</p>
<p>Establishing a strong learning and skills base</p>	<p>The plan supports the development of the city's learning infrastructure. This could consist of the University of Sunderland and Sunderland College.</p>

for Sunderland	<p>Development at Bonnersfield as part of the University of Sunderland will also improve education and skills and qualifications of residents across the city.</p> <p>Development at the Port for renewable technologies and at the land North of Nissan for low carbon technologies may also present opportunities for the learning of new skills.</p>
Building sustainable communities in Sunderland	<p>Through high quality design, the plan aims to provide safe, attractive places to live. Community safety and cohesion policies will help decrease levels of crime and the fear of crime. By ensuring that new developments achieve the highest quality of design, the plan will ensure a well planned and designed city.</p> <p>Site selection in accordance with the sequential approach will help ensure that development is built in the most sustainable locations.</p>
Improving health and well-being whilst reducing inequalities in health	<p>The establishment of green infrastructure would increase access to green and open space in the city which would help promote sport and exercise.</p> <p>By ensuring development is in accessible built up areas, and by promoting walking and cycling, including through the creation of cycle networks, the plan would promote opportunities for recreation in everyday life.</p> <p>By ensuring the provision of appropriately located high quality health and leisure facilities, the plan would increase access to local healthcare provision and present residents with opportunities for exercise.</p> <p>The only locational policies that would have a negative impact on health in the city would be the redevelopment of the existing Crowtree Leisure Centre.</p>
Promoting, enhancing and respecting Sunderland's culture and heritage	<p>The plan respects the city's local heritage and historic environment (including listed buildings and conservation areas) by preserving and enhancing those parts of the built environment that make a positive contribution to local character, valued buildings and areas of historic or townscape significance. Through the development of the Seaburn and Roker coast and the candidate World Heritage Site, sustainable tourism throughout the city would be promoted.</p> <p>The plan also aims to protect the unique historic environment of the city. As a Location for Major Development however, development at Bonnersfield could have a negative effect on the candidate World Heritage</p>

	<p>Site whilst development at the Port could have a negative impact on the Durham Heritage Coast.</p> <p>However, the plan already proposes mitigation measure in this respect as it aims to ensure that development in close proximity to the candidate World Heritage Site is sympathetically designed and does not detract from its setting and also aims to protect green infrastructure across the city especially the coast.</p> <p>The development of LMDs at South Ryhope, Chapelgarth and Burdon Lane will have negative impacts on the landscape but all other LMDs (except those mentioned above), along with the two Strategic Sites and the Regeneration Areas will have a positive impact expect Cherry Knowle and Philadelphia where there will be no significant impact.</p>
Developing sustainable transport and communication	<p>The plan support's an integrated approach to transport and land use planning and focussing and intensifying development in accessible, built up areas the plan aims to reduce reliance on the car through increasing local accessibility and distributing land uses.</p> <p>The plans various transport schemes, in particular the reinvigoration of the Metro, the congestion reduction initiatives and the safeguarding of the Leamside Line, promotes sustainable modes of transport. The two road schemes proposed, amongst other things aim to reduce congestion on other roads in their locality.</p> <p>By improving arterial routes and cycling and walking, the plan promotes the development of better public transport,</p> <p>The plan also aims to support digital connectivity by assisting in the creation of a "University City" which would support high-tech and knowledge based sectors.</p> <p>The Strategic Site North of Nissan could lead to increased congestion due to poor public transport links and an increase in business traffic.</p> <p>Development at Pallion Yard would lead to an increase in private vehicles in the area, whilst development at the Port could also lead to an increase in freight and congestion.</p> <p>There will also be a negative impact at the LMDs at Chapelgarth, Burdon Lane and Philadelphia. All other Strategic Sites, LMDs and Regeneration Areas sites score positively with the exception of Houghton Town Centre and South Ryhope where there will be a neutral effect.</p>

17.4 Cumulatively, the plan would have a positive effect in light of the SA appraisals.

18.0 Proposals for monitoring

18.1 The SEA Directive includes a specific requirement for monitoring the significant environmental effects of plans and programmes and the Environmental Report on the assessment (incorporated within this report) should include a description of the measures envisaged for monitoring the plan.

18.2 The table below summarises the effects identified by the Sustainability Appraisal alongside suggestions for monitoring. Monitoring suggestions are based on existing indicators already monitored and suggested to monitor the Core Strategy, Annual Monitoring Reports and Government guidance.

Table 18.1: Monitoring suggestions

Effect	Monitoring Suggestion
A change in transport related carbon emissions from the use of more sustainable forms of transport and the implementation of road schemes in the city.	Per capita reduction in CO2 emissions in the LA area
Promoting sustainable forms of transport	Length of new no car, bus only or cycle lanes Congestion- average journey time per mile during the morning peak
Development located in a flood risk area	Number of planning permissions granted contrary to EA advice on flooding or water quality grounds
Increasing amounts of renewable energy produced	Renewable energy generation Permitted and completed stand alone renewable energy schemes Number of and potential capacity (MW) of renewable energy schemes permitted and refused
The number of homes that move towards zero carbon energy supply	Percentage housing development that are built to Code for Sustainable Homes level 4 or higher
Air quality due to the development of three road schemes and the sustainable modes of transport proposed	Number of days where air pollution is moderate or high or above Air Quality Strategy Objectives Number of AQMAs Congestion levels in identified nitrogen dioxide hotspots % reduction in NOx and primary PM10 emissions through local

	authority estate and operations
Ensuring that the adverse effects of pollution are minimised during development along the River Wear and Coastal waters	<p>Ecological status of River Wear Estuarine</p> <p>Biological status of River Wear Estuarine</p> <p>Bathing Water Quality</p> <p>Number of bathing waters achieving blue flag status</p> <p>Number of planning permissions granted contrary to EA advice on flooding or water quality grounds</p>
Distribution of employment land	<p>Total amount of additional floorspace (gross & net) by type</p> <p>Amount of employment land available by type</p> <p>Amount of floorspace developed for employment by type</p>
Development of new retail floorspace/ An enhanced perception of the city centre	<p>Total amount of floorspace for town centre uses</p> <p>All town centre related proposals determined in accordance with adopted policy</p> <p>Level of retail vacancy in town centres</p> <p>Office Developments on PDL</p>
Promoting a mix of housing	Affordable housing completions
Supporting the development of the city's learning infrastructure	<p>Amount of completed new university/ college development</p> <p>Land allocated for future education facilities</p>
Promoting sustainable forms of transport	<p>Number of cycle routes developed in the city</p> <p>Access to services and facilities by public transport, walking and cycling</p> <p>Local bus and light rail passenger journeys originating in the authority area</p>

	Percentage of households within 400m of a bus stop
Protect Green Belt and green infrastructure from inappropriate development	<p>Changes to the area of designated Green Belt</p> <p>Inappropriate development approved within the designated Green Belt</p> <p>Number of applications refused within Green Belt</p> <p>Proportion of eligible open space managed to Green Flag status</p> <p>Amount of valued open space (ha) lost to development</p>
Conserve and enhance the biodiversity potential of the city	<p>Change in areas of biodiversity importance</p> <p>Changes in areas of biodiversity importance</p> <p>% of SSSIs in favourable or recovering condition</p>
Improving the health of the city's residents	Adult participation in sport and active recreation
Respect the city's heritage	<p>Applications for new development which are contrary to adopted policies for conservation areas, listed buildings, and schedule ancient monuments.</p> <p>Proportion of grade I and II* Listed Buildings 'at risk'</p>

19.0 What happens next?

19.1 In order to take account of the views of the community and other stakeholders there will be a period of consultation.

19.2 The SA can be read alongside the DPD in order to inform the consultation responses. Furthermore, views on the findings of the SA are welcomed.

19.3 Representations can be made in writing to the Deputy Chief Executive, Office of the Chief Executive, Sunderland City Council, PO Box 102, Civic Centre, Sunderland, SR2 7DN. Alternatively, comments can be emailed to planningpolicy@sunderland.gov.uk.

19.4 Under Article 3 (6) of the SEA Directive, a copy of the Sustainability Appraisal for the Core Strategy DPD will be sent to the following bodies for comment:

- English Heritage
- Environment Agency
- Natural England

19.5 In addition a number of organisations with environmental, social and economic interests will receive notification of both the consultation of the Core Strategy and the SA.

19.6 If consultation gives rise to significant changes that have not been subject to SA, the Council is then required to undertake an appraisal of these changes before the plan can be adopted.

The Sustainability Statement

19.7 Once the DPD has been adopted by the Council, it will be required to provide the public and the consultation bodies with information on how sustainability considerations, highlighted through the SA process, as well as consultation responses, are reflected in the plan or programme and how its implementation will be monitored in the future.

19.8 A Sustainability Statement will be required setting out the above information for publication alongside the adopted DPD.

Appendix 1- Appraisal Matrices

CS1- Spatial development, growth and regeneration

SA Objective	Comment
Objective 1- Climate Change	<p>By focussing development for large scale town centre uses towards the Central Area (which includes the City Centre), the policy is encouraging development which attracts large numbers of people in the most sustainable locations, which are accessible by public transport and may also encourage linked trips.</p> <p>The policy states that the majority of new housing will be located in South Sunderland, which has good public transport links including several Metro station. Washington will be a key provider of employment land. Its location next to the strategic road network will ensure that freight and HGV's are travelling less through the city and therefore producing less emissions. Housing led regeneration in the Coalfield however could mean that there could be an increase in emissions from new residents and an increase in car use, especially if new residents have to use their car to access jobs.</p>
Objective 2- Environmental Limits	By promoting the Central Area as the primary location for offices, retail and main town centre uses, and by ensuring that the majority of new housing will be located in South Sunderland, the re-use of previously developed land in the city will be maximised and that, as the Central Area is the most sustainable location in the city, will promote the use of public transport which will ensure that air quality does not deteriorate in the city.
Objective 3- Environmental Infrastructure	By prioritising Central and South Sunderland for development, the plan aims to maximise the use of previously developed land in the city. This will help to ensure that green infrastructure is protected and maintained across Sunderland.
Objective 4- Economy and Employment	<p>Office development would be prioritised in the Central Area. They are likely to be of a high density, potentially creating far more jobs than if they were located in another part of the city. This would help strengthen the city's economy, increase the number of people economically active and enhance the role and influence of the city centre. By focussing employment land in Washington, it will continue to strengthen the city's economic performance.</p> <p>However, regeneration of the Coalfield is likely to be housing led, and due to the nature of North Sunderland,</p>

	employment land will only be developed when opportunities arise. These two factors are unlikely to strengthen the city's economy and employment market.
Objective 5- Population and Migration	The perception of the City Centre would be enhanced as the Central Area (which the City Centre falls within) will be the primary location for offices, retail and main town centre uses. As the primary location for these key uses, the Central Area will be home to more employment opportunities that are accessible, diverse, plentiful and attractive to local residents.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	The policy aims to ensure that development is built in sustainable locations as it prioritises Central and then South Sunderland for development. These areas, which include the city centre, are the most sustainable in the city and are well served by the Metro and bus infrastructure. These two sub-areas contain nearly half of the city's designated centres which allows for the provision of services and facilities in close proximity to housing, further promoting these areas as sustainable locations, and supporting walking and cycling in these areas.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	No significant impact.
Objective 10- Transport and Communication	By focussing main town centre uses in the Central Area and the majority of housing in South Sunderland, the use of sustainable transport is being promoted.
Short/ Medium term impact (0-10 years)	The policy outlines the key spatial growth principles for the city which will take place throughout the plan period.
Long term impact (11-20 years)	The policy outlines the key spatial growth principles for the city which will take place throughout the plan period.

Permanent vs. Temporary effects	The development of the city is likely to be permanent.
Secondary Effects	The development of the Central Area for a mix of uses will ensure that more people are walking around the area, indirectly leading to a more healthy population.
Areas likely to be significantly affected	The policy outlines how each sub-area will grow therefore it will affect the entire city.
Proposed Mitigation/ Enhancement	None.

CS2- Developing the City's Economic Prosperity

(Note that the Strategic Sites and Locations for Major Development are appraised separately in Chapter 14 and 15)

SA Objective	Comment
Objective 1- Climate Change	Prioritising the City Centre for office development and the defined retail core (also in the City Centre) for new retail floorspace will mean that the policy is encouraging development which attracts large numbers of people in the most sustainable locations, which are accessible by public transport and may also be encouraging linked trips.
Objective 2- Environmental Limits	No significant impact.
Objective 3- Environmental Infrastructure	<p>Focussing new offices and retail in the City Centre and by encouraging the improvement and intensification of existing employment land will mean that the city's Green Belt and green infrastructure is likely to be protected from inappropriate development.</p> <p>The amount of development for economic development, occurring in the Core Strategy could potentially have a negative effect on green infrastructure and biodiversity within the city.</p>
Objective 4- Economy and Employment	<p>The provision of employment land across the city is likely to increase the number of people economically active in the city and help strengthen the city's economy. The investment corridor to be created between Washington and the City Centre along the route of the A1231/ SSTC will also help to strengthen the city's economic performance in comparison to the wider region and the country whilst creating jobs and increasing the number of economically active people in the city.</p> <p>The development of offices and retail in the City Centre is likely to enhance its economic role. New retail floorspace in the city help to diversify the economy and increase the number of economically active people in the city therefore tackling the causes of deprivation.</p> <p>The policy promotes the diversification of the economy by encouraging the development of new employment including low carbon technologies, the development of the North East Low Carbon Enterprise Zone, prioritising the city centre for office development, supporting the development of</p>

	Sunderland's learning infrastructure and promoting retailing, tourism, leisure and heritage and culture in the city.
Objective 5- Population and Migration	The development of offices and retail in the City Centre is likely to enhance its perception to both residents and non-residents and ensure it becomes a viable and vibrant destination as it would become a focus for these uses. The provision of land for economic development, along with the development of new employment sectors, the development of existing sectors and provision of retail floorspace is likely to lead to the creation of employment opportunities that are accessible, diverse, plentiful and attractive to both residents and potential in-migrants, as employment land would be distributed across the five sub-areas.
Objective 6- Learning and Skills	The development of learning infrastructure could consist of the University of Sunderland and Sunderland College. By developing the infrastructure, and making learning more attractive to potential users, opportunities to improve educational attainment and skills and qualifications for the working age population across the city could be created. Training and skills opportunities will also be created.
Objective 7- Sustainable Communities	The prioritisation of the city centre for offices and retail will ensure that the most intensive employment opportunities are developed in the most sustainable location in the city.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	The development of offices and retail in the City Centre is likely to improve the image of the City Centre. The policy also promotes the development of tourism and heritage and culture sectors.
Objective 10- Transport and Communication	The development of the City Centre could lead to increased traffic congestion in the city but it will also significantly promote the use of sustainable transport as the City Centre is very well served by public transport by bus, metro and rail facilities. The mix of uses could also lead to more cycling and walking.
Short/ Medium term impact (0-10 years)	The delivery of the North East Enterprise Zone will take place leading to a significant number of jobs being created.
Long term impact (11-20 years)	Over the longer term, the city centre would be developed for offices
Permanent vs.	Economic growth is temporary but may have permanent effects including the development of

Temporary effects	infrastructure.
Secondary Effects	Economic growth can lead to negative effects on the environment but can be good for population levels, human health and community wellbeing. It may also decrease levels of crime.
Areas likely to be significantly affected	Washington, with the largest proportion of employment land, would be the area most significantly affected. However, as the key location for offices, the City Centre would also be significantly affected.
Proposed Mitigation/ Enhancement	Policy should ensure that air quality is not negatively affected due to the increase in traffic congestion in the city centre. This could be achieved through an appropriate Development management policy. Through effective promotion and making more residents aware of lifelong learning opportunities, skills and qualifications of the working age population could be improved further for example by improving accessibility.

CS3- Sustainable Communities

(Note that the Locations for Major Development are appraised separately in Chapter 15)

SA Objective	Comment
Objective 1- Climate Change	<p>All empty properties brought back into use and the renewal and replacement of the city's housing stock, will ensure that housing developments move towards zero carbon energy supply by 2016.</p> <p>The policy also supports the co-locating of facilities. This would lead to a reduction in carbon emissions as it encourages one multi-use trip, rather than several one-use journeys</p>
Objective 2- Environmental Limits	No significant impact.
Objective 3- Environmental Infrastructure	The amount of development for housing occurring in the Core Strategy could potentially have a negative effect on green infrastructure and biodiversity within the city.
Objective 4- Economy and Employment	No significant impact.
Objective 5- Population and Migration	By bringing empty properties back into use and supporting programmes of improvement, renewal and replacement to regenerate the city's housing stock, will help to improve the city's residential environment. The policy aims to ensure that a choice of housing is provided across the city, including affordable and executive. The policy also aims to provide housing in all parts of the. This will help to meet the needs of current and future residents.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	<p>The policy will help to provide affordable housing and ensure the provision of high quality health, leisure, cultural and education facilities.</p> <p>The co-locating of facilities would help in the creation of sustainable neighbourhoods.</p>
Objective 8- Health and Well-Being	By ensuring the provision of appropriately located high quality health facilities, the plan would increase access to local healthcare provision.

Objective 9- Culture and Heritage	By bringing empty properties back into use and supporting programmes of improvement, renewal and replacement to regenerate the city's housing stock, will help to improve the city's image.
Objective 10- Transport and Communication	The co-locating of facilities will help to reduce traffic congestion in the city reduce reliance on the car.
Short/ Medium term impact (0-10 years)	Development will have to ensure that it is zero carbon by 2016.
Long term impact (11-20 years)	By increasing the choice of accommodation for older households, the city's ageing population will have the right type of accommodation to suit their needs.
Permanent vs. Temporary effects	Developing housing is likely to be permanent.
Secondary Effects	Ensuring an appropriate mix of good quality housing of all types, sizes and tenure (including affordable and executive housing) could help attract more people into the city, leading to an increased population.
Areas likely to be significantly affected	Gentoo regeneration areas are likely to be significantly affected. These include Pennywell, Southwick and Central Hetton.
Proposed Mitigation/ Enhancement	Housing development should ensure that biodiversity is not affected significantly. This should ensure that the cumulative impact of development is also taken into account and not just individual sites.

CS4- Connecting the City

SA Objective	Comment
Objective 1- Climate Change	<p>The policy supports an integrated approach to transport and land use planning. Along with focusing and intensifying development in accessible built-up areas, encouraging a reduction in trip distances and supporting of trips by public transport, walking and cycling, carbon emissions in the city will be reduced. However, by enhancing the City's road network to improve connectivity to key employment sites and neighbourhoods, emissions could increase.</p> <p>The development of the Sunderland Strategic Transport Corridor, may also lead to an increase in emissions, although this is more of a re-alignment of existing road networks. One of the key aims is to improve accessibility to Central Sunderland, which may make the area more attractive to potential users and employers, and could possibly lead to an increase in traffic and therefore emissions.</p> <p>Supporting the reinvigoration of the Metro could attract more users as trains and stations are upgraded making them more attractive. Improving arterial routes through congestion reduction initiatives and enhanced bus infrastructure would encourage more people to use the bus rather than the private car.</p> <p>The potential re-opening of the Leamside Line would lead to road being used less.</p> <p>The creation of a district wide network along with a cross-boundary and other cycle routes including a direct cycle link from Doxford International to Belmont Viaduct, would lead to a reduction in carbon dioxide and other greenhouse gas emissions.</p> <p>By promoting sustainable forms of transport,(protect the rail corridor between South Hylton and the Leamside Line) this will help to ensure that carbon emissions are reduced in the plan period and beyond.</p> <p>The creation of cross-boundary and other cycle routes, including an a district network of cycle routes</p>

	across sub-areas, linking residential areas to employment, local centres, education, leisure and community facilities, and a direct cycle link from Doxford International to Belmont Viaduct, would lead to a reduction in carbon dioxide and other greenhouse gas emissions
Objective 2- Environmental Limits	<p>Focussing development in accessible locations and the development of public transport and walking and cycling routes, will help to will ensure that air quality does not deteriorate.</p> <p>Development of the SSTC would improve accessibility to the city centre and make it more attractive and this might lead to increased vehicle volumes. This is likely to lead to a decrease in air quality in the Central Area and the North and South sub areas.</p> <p>Sustainable transport schemes mentioned in the policy would help to increase air quality in some areas through promoting the bus as a sustainable mode of transport along with the Leamside Line and promoting walking and cycling.</p>
Objective 3- Environmental Infrastructure	The English Coast Pathway initiative from Ryhope Dene to Whitburn South Bents could have a negative impact on the Durham Heritage Coast as more people use the coast, and access the area with private vehicles.
Objective 4- Economy and Employment	The development of the SSTC, and other transport initiatives, would improve accessibility to the City Centre, enhancing its role and helping to tackle deprivation in the city. Development will assist in accelerating improvements in the city and securing the regeneration of key sites within the Central Area. This will have positive impacts on the number of economically active people in the city. This could increase the number of people economically active in the city, enhance the economic role and influence of the city centre, improve the city's economic performance and help to tackle deprivation.
Objective 5- Population and Migration	The development of the SSTC will also help to improve the image of Central Sunderland and the City Centre by helping to facilitate the development of key sites within the city. Development of the new route will also help to attract investment and businesses into the city and this will help to develop appropriate employment opportunities in the city.
Objective 6- Learning and Skills	No significant impact.

Objective 7- Sustainable Communities	The development of the SSTC would help to facilitate the regeneration of key sites within Central Sunderland and the City Centre. Along with the re-invigoration of the Metro and the improvement of arterial routes to the City Centre, this would help to ensure that development is located in the most sustainable location in the city.
Objective 8- Health and Well-Being	By ensuring development is in accessible built up areas, and by promoting walking and cycling, including through the creation of cycle networks, the plan promotes opportunities for recreation in everyday life.
Objective 9- Culture and Heritage	No significant impact.
Objective 10- Transport and Communication	<p>The reinvigoration of the Metro and the congestion reduction initiatives promotes sustainable modes of transport and will help reduce congestion in the city.</p> <p>The SSTC will reduce congestion on existing routes and also help to promote sustainable modes of transport and provide long term transport benefits to the city.</p> <p>By improving arterial routes into the city centre through congestion reduction and other initiatives, the plan promotes the development of better public transport, and public transport routes, that connect well with housing, employment and town centre uses.</p> <p>By supporting an integrated approach to transport and land use planning and focussing and intensifying development in accessible, built up areas the plan aims to reduce reliance on the car through increasing local accessibility and distributing land uses.</p> <p>The protection of the rail corridor between South Hylton and the Leamside Line and the safeguarding of the Leamside Line will help promote sustainable forms of transport within the city and to other parts of the region, and promote routes that connect well with employment, housing and other uses.</p> <p>Improving cycling and walking levels in the city would be achieved through completing a district network of cycle routes across sub-areas and a direct cycle route from Doxford International to Durham</p>

	via Houghton-le-Spring and Belmont viaduct,.
Short/ Medium term impact (0-10 years)	The SSTC would have been developed.
Long term impact (11-20 years)	Phase 3 of the Metro reinvigoration plan is scheduled to start for 2021.
Permanent vs. Temporary effects	The effects of transport infrastructure, for example cycle routes and bus lanes, are likely to be permanent. The use of sustainable methods of transport may be temporary as it is dependent on a number of factors.
Secondary Effects	Implementation of road scheme may lead to an increase in greenhouse gas emissions and air quality deteriorating in areas. There could also be a negative impact on biodiversity because of this. The promotion of public transport schemes could include improving air quality as fewer people use private vehicles leading to better health. The development of more cycle routes could also lead to better health for users.
Areas likely to be significantly affected	<p>Areas around the proposed road schemes are likely to be affected by increased traffic, noise and pollution.</p> <p>The city centre currently has the worst air quality in the city. This could be exacerbated by developing the SSTC. Also bus routes into the city centre are also highlighted from all across the city and this could have positive effects on air quality.</p>
Proposed Mitigation/ Enhancement	The SSTC should ensure that there are walking, cycling and pedestrian facilities, and possibly bus only lanes to ensure that potential users have a range of modes of transport available to them.

CS5 Caring for the City's Environment

SA Objective	Comment
Objective 1- Climate Change	No significant impact.
Objective 2- Environmental Limits	No significant impact.
Objective 3- Environmental Infrastructure	<p>The establishment of green infrastructure would ensure that biodiversity in the city is enhanced and designated sites are protected. The policy also aims to maintain the broad extent of the Green Belt from inappropriate development.</p> <p>The policy sets out to protect and enhance biodiversity habitats and species and sites recognised at international, national and local levels as outlined in the Durham Biodiversity Action Plan. It also states that designated nature conservation sites, will be protected from inappropriate development. The policy also sets out to protect the city's Green Belt from inappropriate development.</p> <p>The policy also states that one of the six key interlinked green corridors is the coast, which includes the Durham Heritage Coast. This gives the corridor an element of protection although one of the key aims of green infrastructure is to increase accessibility and functionality of designated areas. This could lead to a further increase in users which could have a further detrimental impact on the Heritage Coast and could lead to an increase in disturbance to wildlife, habitats and the quality of the coast and an increase in litter etc.</p>
Objective 4- Economy and Employment	No significant impact.
Objective 5- Population and Migration	No significant impact.
Objective 6- Learning and Skills	No significant impact.
Objective 7-	No significant impact.

Sustainable Communities	
Objective 8- Health and Well-Being	The establishment of green infrastructure, comprising of six strategic inter-district corridors and local sub-area corridors, would increase access to green and open space for the vast majority of residents in the city which would help promote sport and exercise.
Objective 9- Culture and Heritage	<p>The policy respect the city's local heritage and historic environment (including listed buildings and conservation areas) by preserving and enhancing those parts of the built environment that make a positive contribution to local character, that establish a distinctive sense of place and which represent the unique qualities of Sunderland.</p> <p>By capitalising on the historic environment in a sensitive and appropriate manner and focussing on their regeneration and tourism potential, the image of the city can be improved whilst also promoting sustainable tourism in the city.</p> <p>The policy also aims to ensure that development does not have a detrimental impact on the city's landscape by protecting, conserving and enhancing the varied landscape character of the city through the retention of important open-breaks and wedges within and between settlements.</p>
Objective 10- Transport and Communication	No significant impact.
Short/ Medium term impact (0-10 years)	Green infrastructure would be established and designated sites would be protected across the city.
Long term impact (11-20 years)	Biodiversity and designated sites across the city would continue to be protected.
Permanent vs. Temporary effects	The effects of establishing green infrastructure corridors across the city may only last for the length of the plan period. It may not be protected under the next plan. The designated nature conservation and heritage assets should be protected permanently as these are also protected under national policy.
Secondary Effects	By improving access to green and open space, green infrastructure can have positive effects on health.
Areas likely to be	The policy affects will be felt citywide on the Green Belt, green infrastructure, designates biodiversity

significantly affected	sites and designated heritage assets.
Proposed Mitigation/ Enhancement	Mitigation measures along the Durham Heritage Coast (identified as a key corridor) could be implemented, which would inform users of the area's importance.

CS6- Adapting to Climate Change

SA Objective	Comment
Objective 1- Climate Change	The aim of the policy is to secure resource efficiency and high environmental standards and thereby achieve – or exceed – the Government’s stepped targets towards Zero Carbon by 2016 for residential developments and 2019 (non-residential development)
Objective 2- Environmental Limits	Will minimise the use of new material and reuse and recycle materials and other resources from all stages of development, design, demolition, construction and operation..
Objective 3- Environmental Infrastructure	Aims to protect local environmental quality; ensures that drainage systems take account of the impact on ecology. Seeks to ensure that water resources are protected
Objective 4- Economy and Employment	No significant impact
Objective 5- Population and Migration	Encouragement of high environmental standards in new housing construction and construction could be attractive to new and existing residents
Objective 6- Learning and Skills	No significant impact
Objective 7- Sustainable Communities	Policy will ensure well designed and sustainable development
Objective 8- Health and Well-Being	Improvements in air quality will assist in maintaining health of population
Objective 9- Culture and Heritage	No significant impact
Objective 10- Transport and Communication	Policy aims to reduce traffic congestion in order to improve levels of nitrogen dioxide
Short/ Medium term impact (0-10 years)	There is a need to make significant progress towards achieving Government’s targets towards Zero Carbon development by 2016/ 2019
Long term impact (11-	It is difficult to ascertain how targets might be altered in the long term if there are changes in National

20 years)	Government
Permanent vs. Temporary effects	The effects of securing more environmentally efficient form of development will be long-term.
Secondary Effects	The move towards more sustainable residential development could attract/ retain population in the city
Areas likely to be significantly affected	The policy will affect the entire City. Areas of new residential development through enhanced quality of construction. Along the River Wear and the Coast where development will need to ensure water quality
Proposed Mitigation/ Enhancement	

CS7- Waste Management

SA Objective	Comment
Objective 1- Climate Change	No significant impact.
Objective 2- Environmental Limits	The policy aims to reduce waste production and increase recycling through applying the waste hierarchy (reduce, re-use, recycle, recover energy from waste and ultimately disposal).
Objective 3- Environmental Infrastructure	No significant impact.
Objective 4- Economy and Employment	No significant impact.
Objective 5- Population and Migration	No significant impact.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	No significant impact.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	No significant impact.
Objective 10- Transport and Communication	By developing a network of small scale local waste management facilities could increase traffic congestion in these areas.
Short/ Medium term impact (0-10 years)	More waste would be recycled and less would be sent to landfill.
Long term impact (11-20 years)	Waste would increasingly be recycled and even less would be sent to landfill.

Permanent vs. Temporary effects	The effects of people disposing of less waste and recycling more is likely to be permanent, as people are educated and get into a pattern of recycling.
Secondary Effects	If less waste is sent to landfill, this can have lead to a reduction in carbon emissions. More congestion in the city could lead to an increase in emissions. Facilitating the development of a network of small scale local waste management facilities could help to increase the percentage of economically active people in the city and could help to diversify the city's economy.
Areas likely to be significantly affected	Those areas which will see the development of small scale local waste management facilities will be most affected.
Proposed Mitigation/Enhancement	Through educating residents and promotional material, waste could be minimised and levels of recycling could increase.

CS8- Minerals

SA Objective	Comment
Objective 1- Climate Change	No significant impact.
Objective 2- Environmental Limits	The policy would not minimise the use of global and local resources by continuing to extracting minerals. Mineral safeguarding areas would ensure that resources are available for the future and ensure that no development is permitted which could cause unnecessary sterilisation by development.
Objective 3- Environmental Infrastructure	No significant impact.
Objective 4- Economy and Employment	The processes involved in extracting minerals could help to develop appropriate employment opportunities that are accessible and diverse and attractive to residents and potential in-migrants.
Objective 5- Population and Migration	No significant impact.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	No significant impact.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	The extraction of minerals from the city's quarries could have a detrimental impact on the city' landscape.
Objective 10- Transport and Communication	The number of vehicles helping to extract minerals and HGVs distributing the minerals across the region and country could lead to an increase in traffic congestion.
Short/ Medium term impact (0-10 years)	The extraction of minerals would have continued in ways which conserve and enhance the quality of the environment and the quality of life for existing and future generations.
Long term impact (11-	Deposits from Mineral Safeguarding Areas safeguarded against unnecessary sterilisation by

20 years)	development.
Permanent vs. Temporary effects	The extraction of minerals would have a permanent effect as once extracted, minerals cannot be replaced. However, the effects of extraction on the landscape can be temporary, as once extraction is complete, the site can be reclaimed and restored.
Secondary Effects	The extraction of mineral could lead to the creation of jobs. This will increase the number of economically active people in the city and help to diversify the city's economy.
Areas likely to be significantly affected	The area surrounding the city's quarries are likely to be the most affected.
Proposed Mitigation/ Enhancement	None identified.

CS9- Central Area

SA Objective	Comment
Objective 1- Climate Change	No significant impact.
Objective 2- Environmental Limits	Development in the City Centre could have a detrimental impact on water quality in the River Wear and could lead to deteriorating air quality.
Objective 3- Environmental Infrastructure	No significant impact.
Objective 4- Economy and Employment	<p>The policy seeks to create a “University City” by supporting proposals which will support knowledge based sectors. This will help to diversify the city’s economy and enhance the economic role and influence of the City Centre. These impacts will be emphasised further with the creation of an Investment Corridor consisting of development sites adjacent to the SSTC and regeneration sites within City Centre.</p> <p>New retail provision in the city centre will help to diversify the economy, create jobs which in turn will increase the percentage of economically active people in the city and tackle the causes of deprivation.</p>
Objective 5- Population and Migration	The development of the University of Sunderland which has a campus in the city centre, through encouraging the creation of a “University City” and by securing the highest possible design standards in new development, controlling the development of tall buildings, seeking to create new public open spaces and through improving the character and setting of key gateways, would enhance the perception of the city centre and develop appropriate employment opportunities that are accessible, diverse, plentiful and attractive to potential in-migrants.
Objective 6- Learning and Skills	The plan supports the continued development of the University of Sunderland. This could create opportunities to improve educational attainment and skills and qualifications for the working age population across the city could be created.
Objective 7- Sustainable	The policy aims to create a well planned and designed community in the City Centre through securing the highest possible design standards in new development, particularly in the city centre, controlling the

Communities	development of tall buildings and seeking to create new public open spaces in the city centre. The city centre is also one of the most sustainable locations in the city.
Objective 8- Health and Well-Being	By encouraging walking, the policy could help to decrease the causes of ill health and promote opportunities for physical activity in everyday life.
Objective 9- Culture and Heritage	<p>The policy aims to protect the unique historic environment of the city and the setting of the candidate World Heritage Site. This policy would also enhance the image of the City Centre through securing the highest possible design standards in new development, particularly in city centre locations, controlling the development of tall buildings and seeking to enhance existing and create new public open spaces in the city centre.</p> <p>The policy also builds on appropriate regeneration of historic uses in the city centre, by utilising opportunities, where appropriate, for the sensitive and adaptive re-use of its historic buildings, parks and space.</p> <p>Improving the character and setting of key gateways in the City Centre would also help to improve its image.</p>
Objective 10- Transport and Communication	The plan aims to support digital connectivity by assisting in the creation of a “University City” which would support high-tech and knowledge based sectors. The plan also aims to improve public transport and encourages walking by enhancing the public realm and improving connectivity.
Short/ Medium term impact (0-10 years)	The emphasis on good design is likely to be implemented immediately,
Long term impact (11-20 years)	The development of a University City is likely to take longer to implement and may occur in the latter half of the plan period.
Permanent vs. Temporary effects	Any detrimental impact on the River Wear could be temporary as measures could be imposed to increase the quality. The effects of good design are likely to be permanent.
Secondary Effects	The city centre is one of the most sustainable locations in the city. By developing here, carbon emissions could be reduced as it could lead to an increase in the use of public transport.
Areas likely to be significantly affected	The city centre will be affected significantly.

Proposed Mitigation/ Enhancement	The plan already aims to mitigate the effects of development on water quality along the River Wear and aims to reduce congestion related air quality.
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CS10- South Sunderland

SA Objective	Comment
Objective 1- Climate Change	<p>The development of the Ryhope to Doxford Link Road would increase vehicle use in the city and would lead to an increase in emissions. However, improving public transport infrastructure and completing a district network of cycle routes will help to reduce emissions.</p> <p>Any new housing developed, including through housing renewal and in the Hendon/ East End regeneration area will be moving towards zero carbon energy supply.</p>
Objective 2- Environmental Limits	<p>The Ryhope to Doxford Park Link Road may lead to an increase in vehicle usage. This will lead to deteriorating air quality.</p> <p>Development in Sunderland South will also maximise the use of previously developed land in the city.</p>
Objective 3- Environmental Infrastructure	<p>The policy outlines the number of locally important green infrastructure corridors which will be protected and enhanced. This includes the Durham Heritage Coast. Green infrastructure corridors will help to enhance the biodiversity potential in the city.</p>
Objective 4- Economy and Employment	<p>Providing land for economic development can help to increase the percentage of economically active people in the city, helping to strengthen the city's economic performance and tackle the causes of deprivation.</p>
Objective 5- Population and Migration	<p>By supporting the renewal of housing areas there will be an improvement in the city's residential environment. By developing land for economic development, job will be created, These will be accessible and diverse and attractive to both local residents and potential in migrants. By providing for executive dwelling, the area will become more attractive to current and future residents.</p>
Objective 6- Learning and Skills	<p>No significant impact.</p>
Objective 7- Sustainable Communities	<p>No significant impact.</p>
Objective 8- Health and	<p>By completing a district network of cycle routes, the policy promotes exercise in everyday life.</p>

Well-Being	
Objective 9- Culture and Heritage	No significant impact.
Objective 10- Transport and Communication	The development of the Ryhope to Doxford Link Road will reduce traffic congestion on existing routes.
Short/ Medium term impact (0-10 years)	The impact of housing renewal may occur over the short to medium term.
Long term impact (11-20 years)	The development of the road may occur over the length of the plan.
Permanent vs. Temporary effects	The effects of the Link Road are likely to be permanent.
Secondary Effects	The development of the Ryhope to Doxford Park Link Road could make the area more attractive to companies wanting to locate to the area and could lead to an increase in jobs. By making access easier to the A19, the Link Road could also be attractive to potential in-migrants, leading to an increase in the local population.
Areas likely to be significantly affected	Doxford Park and Ryhope are likely to be significantly affected as these are not only the locations for housing renewal but also the new Ryhope to Doxford Link Road connects the two areas.
Proposed Mitigation/ Enhancement	The development of the Link Road could have dedicated bus lanes to promote the use of public transport, leading to a reduction in carbon emissions.

CS11- North Sunderland

SA Objective	Comment
Objective 1- Climate Change	Any new housing developed, including through housing renewal, will be moving towards zero carbon energy supply.
Objective 2- Environmental Limits	Promoting the development of the seafront could lead to a deterioration in the quality of the bathing beaches at Seaburn and Roker due to increased visitor numbers.
Objective 3- Environmental Infrastructure	The policy outlines the number of locally important green infrastructure corridors which will be protected and enhanced. The development of the seafront as a tourist destination would lead to an increase in visitors. This could lead to a deterioration in the biodiversity potential of the area including some of the city's designated sites. This would impact upon the condition of the city's SSSI's.
Objective 4- Economy and Employment	Providing land for economic development can help to increase the percentage of economically active people in the city, helping to strengthen the city's economic performance and tackle the causes of deprivation. These impacts are likely to be strengthened with the creation of an Investment Corridor and the ongoing development of the tourism sector in the area.
Objective 5- Population and Migration	By supporting the renewal of housing areas, there will be an improvement in the city's residential environment. By developing land for economic development, and creating an Investment Corridor, jobs will be created that are accessible and attractive to residents and potential in-migrants.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	No significant impact.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	The policy promotes sustainable tourism in the city with regards to the main cultural features by supporting the development of the tourism sector in the area whilst also protecting the areas unique assets from insensitive development and by promoting the development of the seafront, Glass Centre, Stadium of Light, Monkwearmouth Station Museum and candidate World Heritage Site as significant

	visitor destinations.
Objective 10- Transport and Communication	No significant impact.
Short/ Medium term impact (0-10 years)	The impact of housing renewal may occur over the short to medium term.
Long term impact (11-20 years)	
Permanent vs. Temporary effects	The effects of the Investment Corridor in terms of economic growth could be permanent. However, any infrastructure developed as part of it, is likely to be permanent.
Secondary Effects	The creation of an Investment Corridor could lead to increased traffic and congestion in the area.
Areas likely to be significantly affected	The Investment Corridor, and especially industrial estates at Castletown and Hylton Riverside will be significantly affected. This is especially true for Castletown which is also identified as a Housing Renewal area.
Proposed Mitigation/ Enhancement	Appropriate mitigation measures should be put in place at the seafront to ensure that water quality does not deteriorate. This could include more bins or leaflets educating users.

CS12- Washington

SA Objective	Comment
Objective 1- Climate Change	<p>By supporting the potential expansion of existing wind energy sites at Nissan and encouraging the potential development of wind resources surrounding Nissan, there will be an increase in the amount of energy produced by renewable energy.</p> <p>Any new housing developed will be moving towards zero carbon energy supply.</p>
Objective 2- Environmental Limits	No significant impact.
Objective 3- Environmental Infrastructure	The policy outlines the number of locally important green infrastructure corridors which will be protected and enhanced. This will mean that biodiversity in the area is protected.
Objective 4- Economy and Employment	<p>Washington will accommodate a significant proportion of the city's new employment land. Along with the Enterprise Zone (part of the Investment Corridor), this will help strengthen the city's economy and increase the number of people economically active, helping to tackle some of the causes of deprivation in the city. The Low Carbon nature of the Enterprise Zone will help to diversify the city's economy. The areas development for large floorspace uses will also complement the City Centre, where economic development will be focussed towards providing office space, enhancing the City Centres role.</p>
Objective 5- Population and Migration	By accommodating a significant amount of new housing and the Investment Corridor, new employment opportunities will be created making the area attractive to local residents and potential in-migrants.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	No significant impact.
Objective 8- Health and Well-Being	No significant impact.

Objective 9- Culture and Heritage	The policy aims to protect the distinct identity of Washington New Town, through protecting landscaped areas and open space from development; requiring new development to achieve and maintain the high standard of landscaping within the New Town and by maintaining the separation of residential villages from other uses. By doing all this, the image of the city will be improved and will ensure that development does not have a detrimental impact on the landscape and respects the city's diversity, local heritage and cultural fabric. By also ensuring that commercial and residential development does not impact on the rural character of the north bank of the River Wear, these impacts will be emphasised.
Objective 10- Transport and Communication	No significant impact.
Short/ Medium term impact (0-10 years)	The development of employment land, including the Investment Corridor, will create jobs in the short term and throughout the plan period.
Long term impact (11-20 years)	The installation of wind energy resources will help the UK meet its carbon emissions requirements in the long term.
Permanent vs. Temporary effects	The affects of installing wind turbines is likely to be permanent. However, the effects of economic growth will be temporary but the infrastructure arising from it is likely to be permanent.
Secondary Effects	The installation of wind energy resources could impact negatively on biodiversity.
Areas likely to be significantly affected	The area surrounding the Nissan estate could potentially be affected significantly by the installation of wind energy resources.
Proposed Mitigation/ Enhancement	Any proposed development for wind energy resources should be accompanied by an ecological study outlining the environmental impacts of the development, to ensure it does not have a negative impact on biodiversity.

CS13- Coalfield

SA Objective	Comment
Objective 1- Climate Change	Any new housing developed, including through housing renewal and through the regeneration area at Hetton Downs/ Eppleton, will be moving towards zero carbon energy supply.
Objective 2- Environmental Limits	No significant impact.
Objective 3- Environmental Infrastructure	The policy outlines the number of locally important green infrastructure corridors which will be protected and enhanced. This will mean that biodiversity in the area is protected.
Objective 4- Economy and Employment	Providing land for economic development can help to increase the percentage of economically active people in the city, helping to strengthen the city's economic performance and tackle the causes of deprivation. By developing Herrington Country Park as a regional outdoor events area, will also help to create jobs.
Objective 5- Population and Migration	By supporting the renewal of housing areas and identifying Hetton Downs/ Eppleton as a regeneration area, there will be an improvement in the city's residential environment. By developing land for economic development, job will be created. These will be accessible and diverse and attractive to both local residents and potential in migrants.
Objective 6- Learning and Skills	No significant impact.
Objective 7- Sustainable Communities	No significant impact.
Objective 8- Health and Well-Being	No significant impact.
Objective 9- Culture and Heritage	The policy aims to promote and preserve the distinct identity and cultural heritage of the Coalfield. The policy also aims to protect agricultural land in the nationally important landscape of the Magnesian Limestone Escarpment, in the southern Coalfield from inappropriate development.
Objective 10- Transport	The policy aims to create a direct cycle link from Doxford International via Houghton-le-Spring to

and Communication	Durham City. This will help promote sustainable transport and help to increase levels of walking in the city.
Short/ Medium term impact (0-10 years)	The effects of housing renewal are likely to be felt in the short to medium term.
Long term impact (11-20 years)	The distinct identity of the Coalfield will be protected throughout the plan period.
Permanent vs. Temporary effects	The impact of Herrington Country Park as a regional outdoor events area is likely to be temporary as it holds one-off events. However, these events are likely to take place throughout the plan period.
Secondary Effects	By promoting Herrington Country Park as a regional outdoor events area, there could be a detrimental impact upon the wildlife and biodiversity in the park.
Areas likely to be significantly affected	Housing renewal schemes and Herrington Country Park could be significantly affected.
Proposed Mitigation/ Enhancement	The cycle link could also have walking and equestrian routes to make it more attractive to a wide range of users.