

South Sunderland Growth Area

Draft Supplementary Planning Document

Sustainability Appraisal

January 2016



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TABLE OF CONTENTS	1	INTRODUCTION.....	1
	2	SCOPE OF THE SUSTAINABILITY APPRAISAL.....	4
	3	WHAT HAS PLAN-MAKING / SA INVOLVED UP TO THIS POINT?	55
	4	WHAT ARE THE APPRAISAL FINDINGS AND RECOMMENDATIONS AT THIS CURRENT STAGE?	63
	5	SAFEGUARD AND ENHANCE THE REGION'S ENVIRONMENTAL INFRASTRUCTURE (SA OBJECTIVE 1)	64
	6	SECURE SAFE WASTE RECOVERY / DISPOSAL WITHOUT ENDANGERING HEALTH OR HARMING THE ENVIRONMENT (SA OBJECTIVE 2).....	69
	7	PROTECT WATER SOURCES FROM CONTAMINATION AND MINIMISE THE RELEASE OF HARMFUL PRODUCTS INTO THE ENVIRONMENT (SA OBJECTIVE 3).....	74
	8	MINIMISE POLLUTING ACTIVITIES AND CONTAIN AIR POLLUTION TO WITHIN ACCEPTABLE LIMITS (SA OBJECTIVE 4)	78
	9	ADAPT TO AND MITIGATE AGAINST CLIMATE CHANGE (SA OBJECTIVE 5)	81
	10	PROMOTE, ENHANCE AND RESPECT THE REGION'S CULTURE AND HERITAGE (SA OBJECTIVE 6).....	84
	11	IMPROVE HEALTH AND WELL-BEING WHILE REDUCING INEQUALITIES IN HEALTH (SA OBJECTIVE 7)	87
	12	BUILD SUSTAINABLE COMMUNITIES (SA OBJECTIVE 8)	90
	13	ESTABLISH A STRONG LEARNING AND SKILLS BASE (SA OBJECTIVE 9).....	95
	14	STRENGTHEN THE REGIONAL ECONOMY (SA OBJECTIVE 10) & DEVELOP A MORE SUSTAINABLE EMPLOYMENT MARKET (SA OBJECTIVE 11).....	97
	15	DEVELOP SUSTAINABLE TRANSPORT AND COMMUNICATION (SA OBJECTIVE 12).....	100
	16	CONCLUSIONS AT THIS STAGE	103
	17	WHAT ARE THE NEXT STEPS (INCLUDING MONITORING)?	106
	APPENDIX 1 – SCOPING CONSULTATION RESPONSES	108	

1 INTRODUCTION

1.1 BACKGROUND

AECOM is commissioned by Sunderland City Council (SCC) to undertake Sustainability Appraisal (SA), including Strategic Environmental Assessment (SEA) in support of the draft South Sunderland Growth Area Supplementary Planning Document (SPD), here on known as the Masterplan. This Masterplan covers an area known as the South Sunderland Growth Area (SSGA). SA is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, in terms of sustainability issues, with a view to avoiding and mitigating adverse effects and maximising the positives. SA of the Local Plan is a legal requirement.¹

1.2 Sustainability Appraisal Explained

This SA Report follows the initial scoping report which was also commissioned to AECOM. This report seeks to identify the economic, social and environmental impacts of the Masterplan through a combined SA and SEA approach, and suggests ways to avoid or minimise negative impacts and maximise positive ones.

SA is also a tool for communicating the likely effects of a Plan (and any reasonable alternatives), explaining the decisions taken with regards to the approach decided upon, and encouraging engagement from key stakeholders such as local communities, businesses and plan-makers.

The planning and Compulsory Purchase Act (PCPA) 2004 requires an assessment of the sustainability of Supplementary Planning Documents (SPDs). The environmental Assessment of Plans and Programme Regulations 2004 sets out the statutory requirements for local authorities to carry out an SEA of planning and land use documents.

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) which Councils are required to undertake under the European Parliament Directive 2001/42/EC.

The SPD has also been subject to an assessment of its impacts on conservation sites of European importance as is also required under the European Parliament Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. The Habitats Regulations Assessment (HRA), also known as Appropriate Assessment (AA). This is the subject of a separate report that accompanies the SA.

SA provides a decision aiding process that should assist in the development of the plan or programme under assessment. Government guidance on local spatial planning states that:

“The Sustainability Appraisal should perform a key role in providing a sound evidence base for the plan and form an integrated part of the plan preparation process. Sustainability Assessment should inform the evaluation of alternatives. Sustainability Assessment should provide a powerful means of proving to decision makers, and the public, that the plan is the most appropriate given reasonable alternative².”

Government guidance³ advocates a five-stage approach to undertaking SA which is illustrated in **Figure 1.1**.

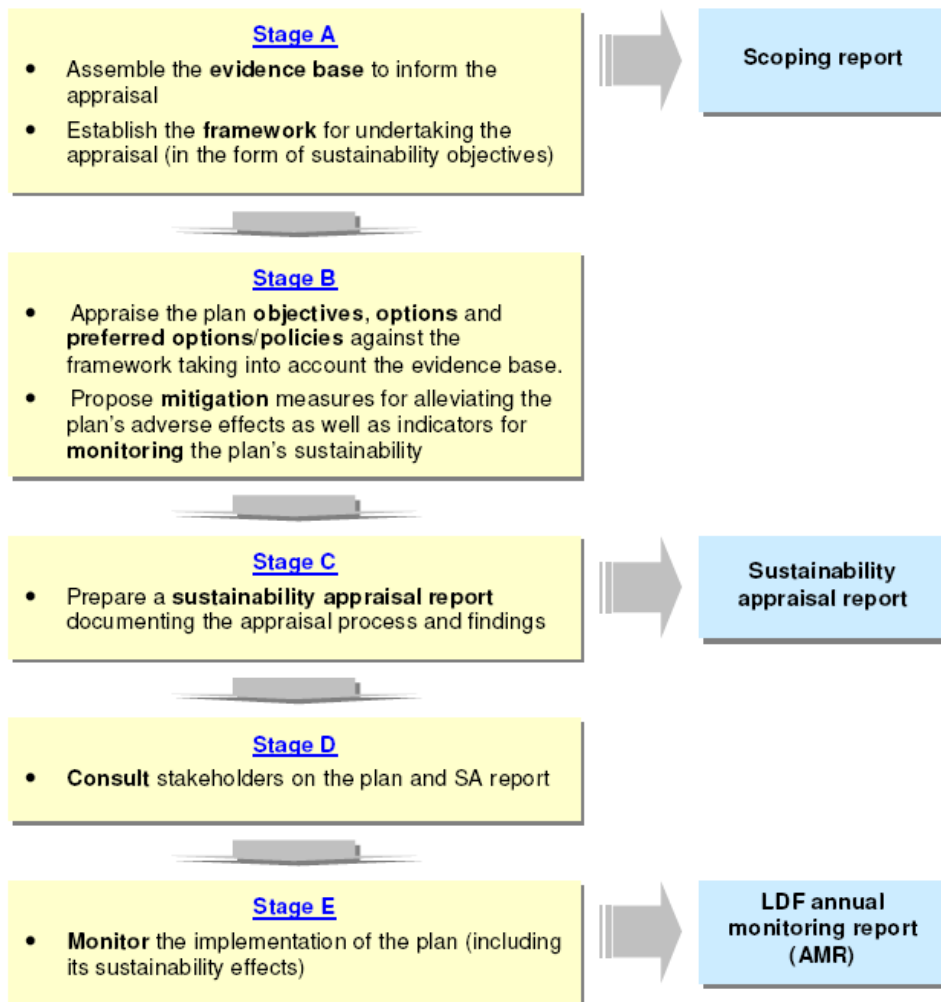
¹ The Town and Country Planning (Local Planning) (England) Regulations 2012 require that an SA Report is published for consultation alongside the ‘Proposed Submission’ Plan document.

² Communities and Local Government (2008) Planning Policy Statement 12: creating strong safe and prosperous communities through Local Spatial Planning London: TSO

³ ODPM (2005) Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, London

- **Stage A** involved gathering an evidence base and defining SA Objectives. The findings of this stage were documented in a Scoping Report that underwent consultation with stakeholders including the statutory consultees (English Heritage, the Environment Agency and Natural England).
- **Stage B** in the SA process involves undertaking the appraisal itself. This involves identifying and evaluating the impacts of the SPD proposals. Mitigation measures for alleviating adverse impacts and measure to enhance positive effects are also proposed at this stage together with potential indicators for monitoring the plan’s implementation.
- **Stage C** in the SA process involves documenting the appraisal and preparing the SA Report (this incorporates the material required for inclusion in the Environmental Report under the SEA Directive).
- 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.

Figure 1.1 Five Stage Approach to SA



1.3 This Report

This report sets out the findings of the Sustainability Appraisal of South Sunderland Masterplan. The report is structured as follows:

- **Chapter 2** sets out the **scope** of the Sustainability Appraisal
- **Chapter 3** sets out up to this point work carried out for the **SA processes and Plan-making**
- **Chapters 4 – 14** set out the **SA findings and recommendations** that relate to the following Sustainability Appraisal Objectives:
 - Safeguard and enhance the region’s environmental infrastructure.
 - Secure safe waste recovery / disposal without endangering health or harming the environment.
 - Protect water sources from contamination and minimise the release of harmful products into the environment.
 - Minimise polluting activities and contain air pollution to within acceptable limits.
 - Adapt to and mitigate against climate change.
 - Promote, enhance and respect the region’s culture and heritage.
 - Improve health and well-being while reducing inequalities in health.
 - Build sustainable communities.
 - Establish a strong learning and skills base.
 - Strengthen the regional economy.
 - Develop a more sustainable employment market.
 - Develop sustainable transport and communication.
- **Chapter 15** sets out the **SA conclusions**
- **Chapter 16** sets out initial proposals for **monitoring** and **what happens next** in the SA process

2 SCOPE OF THE SUSTAINABILITY APPRAISAL

This is Section of the SA Report will introduce the reader to the scope of the SA. In particular, and as required by the Regulations⁴, this Chapter answers the series of questions below.

Table 2.1: Scoping questions answered

SCOPING QUESTION	CORRESPONDING REQUIREMENT (THE REPORT MUST INCLUDE...)
What's the Plan seeking to achieve?	<ul style="list-style-type: none"> An outline of the contents, main objectives of the plan'
What's the sustainability 'context'?	<ul style="list-style-type: none"> The relationship of the plan with other relevant plans and programmes' The relevant environmental protection objectives, established at international or national level
What's the sustainability 'baseline' at the current time?	<ul style="list-style-type: none"> The relevant aspects of the current state of the environment The environmental characteristics of areas likely to be significantly affected
What's the baseline projection?	<ul style="list-style-type: none"> The likely evolution of the current state of the environment without implementation of the plan'
What are the key issues that should be a focus of SA?	<ul style="list-style-type: none"> Any existing environmental problems / issues which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance

2.1 Consultation on the scope

The Regulations require that: 'When deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies'. In England, the consultation bodies are Natural England, The Environment Agency and English Heritage. As such, these authorities were first consulted on the scope of this SA in 25 March 2014. This consultation was achieved by providing a draft 'Scoping Report' for their comment.

2.2 What's the Plan seeking to achieve?

Sunderland City Council ('the council') has produced a Masterplan for the South Sunderland Growth Area (SSGA). The strategy provides a strategic platform to guide the development of the SSGA which consists of four Locations for Major Development identified as Chapelgarth, Cherry Knowle, South Ryhope and Burdon Lane.

The Masterplan and supporting information have been collated in the form of a Supplementary Planning Document (SPD) as part of the Sunderland City Local Development Framework (LDF). As such the draft document will be taken forward through the statutory planning process in accordance with the Town and Country Planning (Local Development) (England) Regulations 2004 (as amended). In addition under the requirements of the European Directive 2001/42/EC a Strategic Environmental Assessment and Appropriate Assessment have been prepared alongside the SPD.

The SPD sets out the following clear vision for the area:

⁴ Environmental Assessment of Plans and Programmes Regulations 2004

“A new sustainable community will be created in South Sunderland which provides a choice of high quality homes in a landscaped setting, well connected to the surrounding area and new and existing local facilities. The natural and built environment will enhance the distinctive characteristics of this unique area which borders the Sunderland Green Belt and provides views across the city and coast.”

In order to deliver the vision a series of regeneration objectives are set out in the SPD. These are as follows:

- To create a high quality built environment which makes the most of existing topography, landscape features, water courses, trees and plants, wildlife habitats, site orientation and microclimate.
- To create a new community with distinct architectural and landscape feature which give the place a unique sense of character.
- To deliver high quality executive housing and wider housing choices.
- Provide new facilities including local centres, primary schools and open space where the greatest number of new and existing residents can access them easily and safely.
- To create development which is well connected to the surrounding area and facilities by road, footpath, cycle route and public transport link.
- To deliver a sustainable community that cares for the City's environment, makes efficient use of natural resources and mitigates against climate change.

The Masterplan as included within the SPD is illustrated in Figure 3.4.

It is important to emphasise that the plan will be strategic in nature that omits consideration of some detailed issues in the knowledge that these can be addressed further down the line (through the planning application process). The strategic nature of the plan is reflected in the scope of the SA.

2.3 What's the sustainability 'context'?

An important step when seeking to establish the appropriate 'scope' of an SA involves reviewing 'sustainability context' messages (e.g. issues, objectives or aspirations) set out within relevant published plans, policies, strategies and initiatives (PPSIs). Sustainability context messages are important, as they aid the identification of the 'key sustainability issues' that should be a focus of the SA. Key messages from this review are summarised below.

Key messages from the National Planning Policy Framework (NPPF)⁵

In March 2012 the National Planning Policy Framework (NPPF) was published. The NPPF, read as a whole, constitutes the Government's view of what sustainable development in England means in practice for the planning system. The following is a summary of guidance included in the NPPF that is of relevance to this SA.

Community wellbeing social role of the planning system is defined in the NPPF as 'supporting vibrant and healthy communities', with a 'core planning principle' being to 'take account of and support local strategies to improve health, social and cultural wellbeing for all'.

The NPPF advises that planning policies should promote the retention and development of local services and community facilities such as local shops, meeting places, sports venues, cultural buildings, public houses and places of worship. The NPPF states that ensuring that there is a 'sufficient choice of school places' is of 'great importance'. To this end, local

⁵ CLG (2012) National Planning Policy Framework [online] available at: <http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf> (accessed 08/2012)
SUSTAINABILITY APPRAISAL REPORT
September 2015

authorities are called upon to take a 'proactive, positive and collaborative approach' to bringing forward 'development that will widen choice in education'.

Specific protection and promotion of town centres is encouraged. Specifically, local planning authorities should 'define the extent of town centres' and set policies that 'make clear which uses will be permitted in such locations', and 'promote competitive town centres that provide customer choice and a diverse retail offer and which reflect the individuality of town centres'.

The Economy

The NPPF highlights the contribution the planning system can make to building a strong, responsive economy by: 'Ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure'.

There is an emphasis on capitalising on 'inherent strengths', and to meeting the 'twin challenges of global competition and of a low carbon future'. There is a need to support new and emerging business sectors, including positively planning for 'clusters or networks of knowledge driven, creative or high technology industries'.

Furthermore, the NPPF states that local plans should support the sustainable growth and expansion of all types of business and enterprise in rural areas and promote the development and diversification of agricultural and other land-based rural businesses.

In terms of ensuring the vitality of Town Centres, the NPPF sets out the need to allocate a range of suitable sites to meet the scale and type of retail.

Housing

The NPPF states that local planning authorities should meet the 'full, objectively assessed need for market and affordable housing' in their area. With a view to creating 'sustainable, inclusive and mixed communities' authorities should ensure provision of affordable housing onsite or externally where robustly justified. Plans for housing mix should be based upon 'current and future demographic trends, market trends and the needs of different groups in the community'. Larger developments are suggested as sometimes being the best means of achieving a supply of new homes, with these to be developed in accordance with the 'principles of Garden Cities'.

Transport and Accessibility

In terms of transport and travel policies, the NPPF notes that these will have an important role in 'contributing to wider sustainability and health objectives'. It calls for the transport system to be balanced 'in favour of sustainable transport', with developments to be located and designed to facilitate these modes of travel. In order to minimise journey lengths for employment, shopping, leisure and other activities, the NPPF calls for planning policies that aim for 'a balance of land uses'. Wherever practical, key facilities should be located within walking distance of most properties.

Air and causes of climate change

The NPPF makes clear that planning policies should be compliant with and contribute towards EU limit values and national objectives for pollutants; and states that new and existing developments should be prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of air pollution. This includes taking into account Air Quality Management Areas (AQMAs) and cumulative impacts on air quality.

The NPPF identifies as a 'core planning principle' the need to 'support the transition to a low carbon future in a changing climate'. A key role for planning in securing radical reductions in GHG emissions is envisioned, with specific reference made to meeting the targets set out in

the Climate Change Act 2008. Specifically, planning policy should support the move to a low carbon future through: planning for new development in locations and ways which reduce GHG emissions; actively supporting energy efficiency improvements to existing buildings; setting local requirements for building's sustainability in a way that is consistent with the Government's zero carbon buildings policy; positively promoting renewable energy technologies and considering identifying suitable areas for their construction; and encouraging those transport solutions that support reductions in greenhouse gas emissions and reduce congestion.

Water resources and quality

In relation to water resources, the NPPF states that local planning authorities should produce strategic policies to deliver the provision of a variety of infrastructure, including that necessary for water supply.

Land use, landscape and the historic environment

The NPPF states that the planning system should protect and enhance valued landscapes. Particular weight is given to 'conserving landscape and scenic beauty'. According to the NPPF, 'great weight' should be given to the conservation of the landscape and scenic beauty of Areas of Outstanding Natural Beauty (AONB), which have the 'highest level of protection' in this regard. The conservation of cultural heritage and wildlife in these areas is also an 'important consideration'.

The NPPF calls for planning policies and decisions to 'encourage the effective use of land' through the reuse of land which has been previously developed, 'provided that this is not of high environmental value'. Whilst there is no longer a national requirement to build at a minimum density, the NPPF requires local planning authorities to 'set out their own approach to housing density to reflect local circumstances'. The value of best and most versatile agricultural land should also be taken into account.

In relation to the coast, the NPPF states that local planning authorities should maintain the character of such areas by 'protecting and enhancing distinctive landscapes', including in those areas that have been defined as Heritage Coast. Authorities should also look to improve 'public access to and enjoyment of the coast'.

The NPPF states that local planning authorities should set out in their local plan a 'positive strategy' for the 'conservation and enjoyment of the historic environment', including those heritage assets that are most at risk. Assets should be recognised as being an 'irreplaceable resource' that should be conserved in a 'manner appropriate to their significance', taking account of 'the wider social, cultural, economic and environmental benefits' that conservation can bring, whilst also recognising the positive contribution new development can make to local character and distinctiveness.

In relation to conserving and enhancing the natural environment, the NPPF calls upon the planning system to protect and enhance soils. It should also prevent new or existing development from being 'adversely affected' by the presence of 'unacceptable levels' of soil pollution or land instability and be willing to remediate and mitigate 'despoiled, degraded, derelict, contaminated and unstable land, where appropriate'.

Flood Risk

The NPPF requires Local Plans to take account of the effects of climate change in the long term, taking into account factors such as 'flood risk, coastal change, water supply and changes to biodiversity and landscape'. Planning authorities are encouraged to 'adopt proactive strategies' to adaptation. New developments should be planned so that they avoid increased vulnerability to climate change impacts. Risks should be managed through adaptation measures including the well planned green infrastructure.

In terms of flooding, the NPPF calls for development to be directed away from areas highest at risk, with development ‘not to be allocated if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding’. Where development is necessary, it should be made safe without increasing levels of flood risk elsewhere. The NPPF also states that local planning authorities should avoid ‘inappropriate development in vulnerable areas or adding to the impacts of physical changes to the coast’ in order to reduce the risk from coastal change.

Biodiversity and Green Infrastructure

In order to contribute to the Government’s commitment⁶ to halt the overall decline in biodiversity, the NPPF states that the planning system should look to minimise impacts on biodiversity, with net gains in biodiversity achieved wherever possible.

The NPPF states that planning policies should promote the ‘preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species’. The NPPF contains a commitment to ‘plan for biodiversity at a landscape-scale across local authority boundaries’.

The NPPF calls upon local authorities to set criteria based policies for the protection of internationally, nationally and locally designated sites, giving weight to their importance not just individually but as a part of a wider ecological network.

Positive planning for ‘green infrastructure’ is recognised as part of planning for ecological networks. Green infrastructure is defined as being: ‘a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities’.

Supplementing the NPPF

In addition to reviewing relevant contextual messages set out within the NPPF, it is also important to ‘cast the net wider’ and consider contextual messages established through other plans, policies, strategies and initiatives. The following is a summary of the review presented within the Scoping Report, updated where necessary.

BIODIVERSITY, FLORA & FAUNA

Evidence Source	Key sustainability objectives and messages
S. 40 of the Natural Environment and Rural Communities Act (2006)	Public authorities must have regard to the purpose of conserving biodiversity.
Biodiversity Strategy for England (2020)	Ensure biodiversity considerations become embedded in all the main sectors of economic activity, public and private.
A Biodiversity Audit of the North East (2001)	Provides information on those species and habitats which occur within the North East Region that are regionally, nationally or internationally important to inform local action plans.
Durham Biodiversity Action Plan (2007)	A series of work-plans to help species and habitats in the Durham area that are considered to be under threat locally, nationally or internationally
Sunderland UDP (1998)	Protect and enhance the best features of both the built and natural environment.

⁶ At the European level, a new EU Biodiversity Strategy was adopted in May 2011 in order to deliver on the established Europe-wide target to ‘halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020’.

Evidence Source	Key sustainability objectives and messages
The Sunderland Strategy (2008)	It is essential to not only conserve and protect the Sunderland’s natural environment, but to bring it into the day-to-day lives of its residents.
Sunderland Green Infrastructure Strategy & Associated Green Space Audit 2011	<i>“The economic and social development of the city will be enhanced through its setting in surroundings of high quality green infrastructure that will be provided through a network of green spaces and links, including coastal, river and other water features, designed and managed to maximise their multifunctional potential.”</i>
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	Spatial Objective 6 - Aims to <i>“Protect the city’s biodiversity, geological resource, countryside and landscapes, including the River Wear, the coast and the Magnesian Limestone Escarpment and seek opportunities to enhance that resource where possible, whilst ensuring that all homes have good access to a range of interlinked green infrastructure”</i> .
TNEI Report for Sunderland Council (November 2013); ‘Ecological Assessment, Management Plan and Design Strategy for Sunderland South’.	TNEI recommend that a range of design, mitigation and compensation measures are likely to be required to ensure development works in South Sunderland do not have a negative impact upon the ecological interests of the area.
‘Making Space for Nature: A review of England’s Wildlife Sites and Ecological Network’. Sir John Lawton (September 2010)	“Despite our best efforts, England continues to lose species and habitats...Stopping and reversing the main threats to England’s wildlife means stopping further damage and reversing and compensating for habitat destruction by large-scale habitat re-creation; getting the management of surviving patches of semi-natural habitats right; and making the farmland matrix more benign’.

LAND RESOURCES

Evidence Source	Key sustainability objectives and messages
Joint Municipal Waste Management Strategy (2007) (Revised 2012).	Prioritise waste management in accordance with the waste hierarchy: reduce, re-use, recycle, and recover energy from waste. Protect our human health and environment by producing less waste and using it as a resource wherever possible.
Sunderland Contaminated Land Strategy (2001) and Review 2003	Develop a strategic approach to inspection and remediation of contaminated sites.
Sunderland Unitary Development Plan (1998)	Ensure that the sum total of planning decisions does not deny future generations the best of today’s environment and resources.
Sunderland Strategy (2008)	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.
Model of Waste Arisings and Waste Management Capacity for the North East of England Waste Planning Authorities (July 2012)	<p>Waste Planning Authority’s should continue to monitor waste arisings, waste management capacity and the level of economic growth and thus plan accordingly to support effective sustainable waste management facilities where appropriate.</p> <p>“Whilst there appears to be broadly sufficient regional capacity for most of the waste streams considered in this report, at a regional level, assuming recycling, composting and recovery rates continue to increase as previously recorded, the WPAs should continue to monitor waste arisings, waste management capacity and the level of economic growth and thus plan accordingly to support effective sustainable waste management facilities where appropriate”.</p>
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	<p>Spatial Objective 1 - Aims to “<i>Ensure an appropriate distribution and balance of employment, housing growth and other competing land uses. Where possible, maximise the reuse of previously developed land so as to minimise the urbanisation of greenfield land, whilst planning for sustainable growth of the city’s population, including the retention of young economically active age groups.</i>”</p>

WATER QUALITY & RESOURCES

Evidence Source	Key sustainability objectives and messages
Water Environment (Water Framework Directive) (Northumbria River Basin District) Regulations (2003)	Establish a new integrated approach to the protection, improvement and sustainable use of rivers, lakes, estuaries, coastal waters and groundwater.
Water Environment (Water Framework Directive) (Northumbria River Basin District) Regulations (2003)	Ensure that all ground and surface water bodies, including estuarial and coastal waters, reach ‘good’ status by 2015.
Sunderland Contaminated Land Strategy (2001)	Develop a strategic approach to inspection and remediation of contaminated sites.
Sunderland Contaminated Land Strategy (2001)	To work in partnership with other local authorities and the Environment Agency to make improvements to air and water quality, protect water sources from contamination and minimise the release of harmful products into the environment.
Sunderland Strategy (2008)	Sustainable community strategy setting out what the people who live, work and study in the city today would like to see by 2025.
Sunderland Unitary Development Plan (1998)	Ensure that the sum total of planning decisions does not deny future generations the best of today’s environment and resources.
Sunderland Flood Risk Assessment (2010)	Flood Risk Assessment will be required for new developments in vulnerable locations.
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	<p>Spatial Objective 2 - Aims to “<i>Adapt to and minimise the impact of climate change by reducing carbon emissions and seeking to reduce the risk and impact of flooding</i>”.</p>

AIR QUALITY AND NOISE

Evidence Source	Key sustainability objectives and messages
City of Sunderland Unitary Development Plan (UDP) (1998)	Land use and environmental policies should support efforts to reduce all forms of pollution, and in particular the effects of motor vehicles.
Sunderland Strategy 2008-2025	Continue to monitor air quality within the city and take any necessary steps to achieve and maintain government standards.
Tyne and Wear Local Transport Plan (2006)	We must wherever possible prevent further areas in Tyne and Wear from becoming Air Quality Management Areas (AQMA)
Tyne and Wear Air Quality Delivery Plan	<ul style="list-style-type: none"> • Governance and monitoring arrangements to drive improvement forward; • Current air quality levels and measures in the region,; • New air quality indicators and targets for Tyne and Wear; • Challenges to our proposed objectives and solutions, and how these can be overcome, • Examples of national and regional best practice which can be used to improve Tyne and Wear air quality levels, and • Proposed actions to improve area specific and overall Tyne and Wear air quality levels which affects us all.
Sunderland Local Air Quality Management 2011	<p>The overall aim is to outline air quality conditions across Tyne and Wear, to show where potential problems lie and finally to outline what can be done to improve air quality and thus the quality of life for the people of Tyne and Wear. In doing so, the plan sets out:</p> <ul style="list-style-type: none"> • The background to air quality issues and air quality objectives in Tyne and Wear; • Governance and monitoring arrangements to drive improvement forward; • Current air quality levels and measures in the region; • New air quality indicators and targets for Tyne and Wear; • Challenges to our proposed objectives and solutions, and how these can be overcome; • Examples of national and regional best practice which can be used to improve Tyne and Wear air quality levels; and • Proposed actions to improve area specific and overall Tyne and Wear air quality levels which affects us all. <p>The key issues raised by the plan are an emphasis on action and a clear commitment that we must, wherever possible, prevent further areas in Tyne and Wear from becoming AQMAs – areas where air quality had been recognised as being especially poor.</p>

Evidence Source	Key sustainability objectives and messages
<p>Tyne & Wear Draft Third Local Transport Strategy 2011-2021</p>	<p>Sets out the vision for transport in Tyne and Wear as: <i>“Tyne and Wear will have a fully integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. Our strategic networks will support the efficient movement of people and goods within and beyond Tyne and Wear, and a comprehensive network of pedestrian, cycle and passenger transport links will ensure that everyone has access to employment, training, community services and facilities.”</i></p> <p>The five goals of the transport strategy that have been adopted to meet this vision are:</p> <ul style="list-style-type: none"> • To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes; • To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events; • To contribute to healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security; • To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services; and • To protect, preserve and enhance our natural and built environments, improving quality of life and creating high quality public places. <p>These goals have also been summarised under the term "Safe and Sustainable Communities". Therefore the strategy has been focused on ways to address challenges within the following three key areas :</p> <ul style="list-style-type: none"> • Supporting economic development and regeneration; • Addressing climate change; and • Supporting safe and sustainable communities
<p>Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.</p>	<p>Spatial Objective 2 - Aims to <i>“Adapt to and minimise the impact of climate change by reducing carbon emissions and seeking to reduce the risk and impact of flooding”</i>.</p> <p>Spatial Objective 5 aims to <i>“Implement sustainable transport solutions that enhance the city’s profile, its economic competitiveness and achieve low-carbon outcomes whilst enhancing accessibility for all to a full range of facilities and jobs and reducing dependency on the car. To implement traffic management measures to manage congestion and associated environmental and health impacts of traffic”</i>.</p>

CLIMATIC FACTORS, FLOODING & ENERGY RESOURCES

Evidence Source	Key sustainability objectives and messages
White Paper - Our Energy Future - Creating a low Carbon Economy (2003)	Cut CO ₂ emissions by 60% by 2050
White Paper - Our Energy Future - Creating a low Carbon Economy (2003)	Generate 10% of electricity from renewable energy sources by 2010 and 20% by 2020
North East Renewable Energy Strategy (2005)	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.
Tyne and Wear Local Transport Plan (2006)	Implement an efficient and sustainable pattern of movement and communication, which enables people to have a higher quality of life.
Tyne & Wear Draft Third Local Transport Strategy 2011-2021	<p>Sets out the vision for transport in Tyne and Wear as:</p> <p><i>“Tyne and Wear will have a fully integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. Our strategic networks will support the efficient movement of people and goods within and beyond Tyne and Wear, and a comprehensive network of pedestrian, cycle and passenger transport links will ensure that everyone has access to employment, training, community services and facilities.”</i></p> <p>The five goals of the transport strategy that have been adopted to meet this vision are:</p> <ul style="list-style-type: none"> • To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes; • To reduce carbon emissions produced by local transport movements; and to strengthen our networks against the effects of climate change and extreme weather events; • To contribute to healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security; • To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services; and • To protect, preserve and enhance our natural and built environments, improving quality of life and creating high quality public places. <p>These goals have also been summarised under the term "Safe and Sustainable Communities". Therefore the strategy has been focused on ways to address challenges within the following three key areas :</p> <ul style="list-style-type: none"> • Supporting economic development and regeneration; • Addressing climate change; and

Evidence Source	Key sustainability objectives and messages
	<ul style="list-style-type: none"> Supporting safe and sustainable communities.
The Sunderland Strategy (2008)	Sustainable Development is a crosscutting challenge for all themes to address, to reinforce the need for all themes to tackle significant sustainable development issues, such as Climate Change. 26% reduction target in carbon emissions by 2022.
Climate Change Action Plan for Sunderland (2008) and Progress Report 2010	<p>Reducing carbon dioxide emissions from housing, public and commercial organisations and transports, by at least 26% between 1990 and 2022.</p> <p>Reducing methane emissions from the disposal of domestic waste, by at least 75% between 2001 and 2022.</p>
Sunderland Strategic Flood Risk assessment (2010)	Flood Risk Assessment will be required for new developments in vulnerable locations.
Weather & Climate Risk Management Strategy for Sunderland Rev 1 (2010)	<p><i>“Sunderland is a city committed to tackling the causes and impacts of climate change. This commitment comes from the Sunderland Partnership and Sunderland City Council signing the Nottingham Declaration on Climate Change in November 2001.</i></p> <p><i>This public commitment has been broadened and refreshed recently, by signing the EUROCITIES Declaration on Climate Change in November 2008, along with the EU Covenant of Mayors on Climate Change in January 2009, which is being signed in collaboration with all North East local authorities.</i></p> <p><i>Within the Sunderland Strategy 2008 to 2025, the city has key aims around becoming a safe city, a healthy city and a green city, that protects its built and natural environment. This Action Plan is the framework that shows how the risks associated with weather and climate change will be addressed, to ensure the city’s key aims are not compromised by climate change.”</i></p>
Sunderland City Council’s Carbon Plan 2007-2012 (2007)	<p>Sunderland City Council has developed a Carbon Plan to reduce the carbon emissions from its own operations over the next 5 years. This will serve two key purposes:</p> <ul style="list-style-type: none"> To reduce the Council’s own contribution to Climate Change; and To reduce the Council’s energy costs <p>These aims are encapsulated within the Carbon Vision: <i>“Sunderland City Council will become a LOW CARBON COUNCIL by using energy more efficiently and by using and developing more of our own low-carbon energy sources.”</i></p>
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	<p>Spatial Objective 2 - Aims to <i>“Adapt to and minimise the impact of climate change by reducing carbon emissions and seeking to reduce the risk and impact of flooding”</i>.</p> <p>Spatial Objective 12 – Aims to <i>“Manage the city’s mineral resources ensuring the maintenance of appropriate reserves to meet the future needs of the community whilst making sure that environmental impacts are properly considered”</i>.</p>

COMMUNITY HEALTH, EQUALITY & EDUCATION

Evidence Source	Key sustainability objectives and messages
Integrated Regional Framework for the North East (2008)	Provides a framework for making difficult decisions with regards to balancing social, economic and environmental concerns.
Making it Happen: The Northern Way (2004)	Promote objectives for creating sustainable communities in the North East.
Sunderland Unitary Development Plan (UDP) (1998)	Achieve a healthier city through work with the Health Authority.
Sunderland Strategy 2008 - 2025 (2008)	Sustainable community strategy setting out what the people who live, work and study in the city today would like to see by 2025.
Interim Strategy for Housing Land (2006)	Identifies and supports the release of land to accommodate about 8,750 additional dwellings between 2004 and 2016 and 12,250 to 2021.
Sunderland 2012 Strategic Housing Market Assessment (May 2013)	A comprehensive Strategic Housing Market Assessment (SHMA) for Sunderland. This research provides a robust and defensible evidence base for future policy development. The research focuses on four core areas: a review of housing markets; an assessment of housing need and affordable requirements; a review of general market requirements; and provides policy recommendations.
Housing Strategy for Sunderland 2006 – 2011 (“Housing for the Future”)	Forms an integral part of the City Council’s vision of achieving the highest quality of life for the city residents and ensure that the housing needs and aspirations of people are identified, and resources are spent on meeting local objectives.
Housing Futures 2010-2025 (Sunderland Housing Priorities Plan)	Sets out the priorities for the city to 2025 including supporting sustainable economic growth, developing and delivering new homes, improving the existing housing stock, meeting the accommodation needs of vulnerable and socially excluded people, and promoting sustainable living across the city.
Sunderland City Council Strategic Housing Land Availability Assessment (SHLAA) (April 2013).	The analysis demonstrates that Sunderland can identify sufficient suitable land for housing to maintain a rolling programme of deliverable sites over the next 15 years to meet its requirements. Potential sites are available in all areas of the city, though the greatest potential is in the South Sunderland and Coalfield sub areas.
Sunderland Unitary Development Plan (1998)	<p>In 1998, the council adopted the Unitary Development Plan (UDP). The UDP provides a comprehensive policy framework for the development of the city in the period up to 2006 as well as a starting point in the consideration of planning applications for the development or use of land. Since 1998 there have been a number of pressures and changes in circumstance that have resulted in the need to review certain parts of the Plan. A formal review of the UDP commenced in November 2000 and two amendments have since been prepared:</p> <ul style="list-style-type: none"> • In January 2001, Alteration Number 1, which concerned strategic housing policies, was placed on Deposit. However, it should be noted that this document was not progressed beyond this stage for technical reasons. • In September 2001 work began on a separate alteration which addressed the planning framework for the Central Sunderland area

Evidence Source	Key sustainability objectives and messages
	(Alteration Number 2) – but which does not cover the geographic location of the Sunderland Growth Area.
Core Strategy (2012)	The Core Strategy lies at the heart of the Local Development Framework (LDF) and sets out, in policy form, the main elements of the Planning framework for Sunderland, underpinning all development in the city for the next 15 years. This includes the examination of broad spatial issues such as the environment, housing, economic development, and transport. The Council is presently reviewing the position regarding the publication of the Core Strategy (Revised Preferred Options - 2009) which is based around 4 development options for the whole city setting out where new development might be located.
Sunderland Economic Masterplan – “Smart & Sustainable” (2010)	The Sunderland Economic Masterplan sets out the direction for the city’s economy over the next 15 years, and sets out the vision, aims and the actions of private, public and voluntary sector partners across the city need to take to ensure Sunderland has a prosperous and sustainable future.
Sunderland East Local Area Plan (2009-2011)	The East Local Area Plan (LAP) forms one of five LAP’s covering the Sunderland city council administrative area – and includes the Ryhope and Doxford wards). The Plan focuses activity and resources on the key issues identified by local people in relation to the immediate area in which they live in order to make the East area a better place to live and work.
Draft Sunderland Greenspace Audit and Report (2012)	This draft Audit and Report is designed to set local standards and guidelines based on assessments of local needs, demographics and audits of existing open spaces. It provides the basis for addressing quantitative and qualitative deficiencies through the planning process and recommends policies and actions for inclusion within Sunderland City Council documents. It will also enable the City Council to ensure the most effective and efficient use of greenspaces within the city and plan and respond appropriately to any pressures of immediate and future developments. It identifies greenspace provision at the Area Regeneration Framework level and the Sunderland Growth Area is included in the “Sunderland East” ARF area.
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	<p>Spatial Objective 7 – Aims to “<i>Develop cohesive, inclusive and attractive sustainable communities and neighbourhoods that are well integrated with schools, shops, services, facilities and open space whilst ensuring that the diverse needs of the city’s different communities are met</i>”.</p> <p>Spatial Objective 8 – Aims to “<i>Improve and protect citizens’ health, promote healthy lifestyles and ensure the development of facilities to enable lifelong learning to reduce inequality and ensure a high quality of life</i>”.</p>

LOCAL ECONOMY & EMPLOYMENT, INCLUDING TOURISM

Evidence Source	Key sustainability objectives and messages
Integrated Regional Framework for the North East (2008)	Provides a framework for making difficult decisions with regards to balancing social, economic and environmental concerns.
Sunderland Strategy 2008 - 2025 (2008)	Sustainable community strategy setting out what the people who live, work and study in the city today would like to see by 2025 which would create a prosperous city.
Core Strategy (2012)	The Core Strategy lies at the heart of the Local Development Framework (LDF) and sets out, in policy form, the main elements of the Planning

Evidence Source	Key sustainability objectives and messages
	<p>framework for Sunderland, underpinning all development in the city for the next 15 years. This includes the examination of broad spatial issues including economic development. The Council is presently reviewing the position regarding the publication of the Core Strategy (Revised Preferred Options - 2009) which are based around 4 development options for the whole city setting out where new development might be located.</p>
<p>Sunderland Economic Masterplan – “Smart & Sustainable” (2010)</p>	<p>The Sunderland Economic Masterplan sets out the direction for the city’s economy over the next 15 years, and sets out the vision, aims and the actions of private, public and voluntary sector partners across the city need to take to ensure Sunderland has a prosperous and sustainable future.</p>
<p>Sunderland East Local Area Plan (2009-2011)</p>	<p>The Sunderland East LAP has a number of local economy and employment objectives including:</p> <ul style="list-style-type: none"> ▪ Helping people to get a new or better job by providing suitable work-related training courses; and ▪ Encouraging young people to continue into further education and employment. <p>To make more of key attractions, and attract more visitors to the City to see them.</p>
<p>Regional Economic Strategy for the North East England (2006-2016)</p>	<p>The Strategy sets out a number of actions which actively support the achievement of sustainable development including:</p> <ul style="list-style-type: none"> ▪ Providing specialist business support for encouraging resource efficiency; ▪ A strong focus on the development and deployment of low carbon technology and renewable energy; ▪ Raising economic participation in deprived communities; ▪ Promoting equality and diversity; and ▪ Ensuring the incorporation of sustainable development principles and best practice in the planning, management and design processes of regeneration schemes.
<p>Regional Economic Strategy Action Plan 2006 - 2011</p>	<p>The Action Plan covers the first five year period (2006-2011) of the life-span of the Regional Economic Strategy for the North East of England (2006-2016).</p> <p>The 5 Year Action Plan:</p> <ul style="list-style-type: none"> ▪ Demonstrate a clearer linkage between economic growth targets and the investments which will enable these targets to be achieved; ▪ Shows how public agencies will address market failures and use public resources to leverage more private investment across the Region; and ▪ Outlines how interventions will increase productivity and boost economic participation ▪ Ensure sustainable, long term economic growth. <p>The principles of sustainable development are embedded throughout the Action Plan. It considers how best to promote social inclusion and achieve a wide range of environmental benefits and consultations on Sustainability Appraisal and Strategic Environmental Assessment were undertaken alongside the Action Plan.</p>

Evidence Source	Key sustainability objectives and messages
<p>Sunderland Unitary Development Plan (UDP) (1998)</p>	<p>In 1998, the council adopted the Unitary Development Plan (UDP). The UDP provides a comprehensive policy framework for the development of sustainable growth in the city in the period up to 2006 as well as a starting point in the consideration of planning applications for the development or use of land. Since 1998 there have been a number of pressures and changes in circumstance that have resulted in the need to review certain parts of the Plan. A formal review of the UDP commenced in November 2000 and two amendments have since been prepared:-</p> <ul style="list-style-type: none"> • In January 2001, Alteration Number 1, which concerned strategic housing policies, was placed on Deposit. However, it should be noted that this document was not progressed beyond this stage for technical reasons. • In September 2001 work began on a separate alteration which addressed the planning framework for the Central Sunderland area (Alteration Number 2) – but which does not cover the geographic location of the Sunderland Growth Area.
<p>North East England Tourism Strategy (2005-2010)</p>	<p>Promotes the expansion of tourism within the North East by means of encouraging closer working between the public and private sectors; defining priorities for public action and public and private investment; making a clear commitment to promoting the expansion of tourism whilst safeguarding and enhancing the area’s natural environment and built Heritage; and shows how investment in tourism can enhance the quality of life in the North East through creating more jobs and improving facilities.</p>
<p>Cities, Coast & Culture – Tyne & Wear Tourism Management Plan 2008 – 2011 (2009)</p>	<p>An action plan for all the organisations and businesses involved in the management, development and promotion of Tyne and Wear’s “visitor experience”. The plan vision is that Tyne and Wear’s visitor destinations will be renowned for the cultural experience, the city experience and the coastal experience they offer, attracting leisure and business visitors from all over the UK and from overseas. This will bring economic benefit through spend and jobs and provide a major contribution to the regeneration, quality of life and pride of our communities.</p> <p>The TMAP has 10 objectives – one of which is to “Enhance and conserve the region’s natural, heritage and cultural assets”.</p>
<p>North-East England Visitor Economy Strategy - Draft (2010-2020)</p>	<p>The strategy looks to 2020 and seeks to influence attractors, infrastructure and services. It also aligns with the national strategy in aiming for an annual 5% increase in the value of the visitor economy, by improving visitor yield, and by reducing seasonal and spatial disparities. Key areas for action include developing “Great products”, “Great experiences”, “Great places” and Creative marketing – to target markets.</p>
<p>Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.</p>	<p>Spatial Objective 3 – Aims to “Facilitate economic growth by providing a wide portfolio of high quality employment sites, whilst supporting the development of new key employment sectors, including the low carbon economy, and strengthening existing industry.”</p>

TRANSPORTATION

Evidence Source	Key sustainability objectives and messages
Integrated Regional Framework for the North East (2008)	Aims to provide a framework for making difficult decisions with regards to balancing social economic and environmental concerns.
The Tyne & Wear Local Transport Plan (2005)	Designed to implement an efficient and sustainable pattern of movement and communication, which enables people to have a higher quality of life.
The Third Local Transport Strategy 2011-2021 (Tyne & Wear)	The Strategy’s vision is to see the Tyne and Wear area <i>have a fully integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life.</i>
Sunderland Unitary Development Plan (UDP) (1998)	Sets out the requirements for land use, improvement and protection of the environment and management of transport.
Sunderland Strategy (2008)	Develop an attractive and accessible City.
On Your Bike - A Cycling Strategy for the City of Sunderland (2002)	Ensure that policies to increase cycling and meet the needs of cyclists are fully integrated into its other policy Initiatives.
Local Development Framework Topic Paper 1.6 ‘Connectivity’ (2009)	Ensure Sunderland is well connected through good access to town and retail centres whilst reducing the need to travel. Encourage the use of public transport, walking, cycling and reduce the reliance on the private car.
Sunderland Local Plan: Core Strategy and Development Management Policies (Draft Revised Preferred Options) August 2013.	Spatial Objective 5 aims to <i>“Facilitate economic growth by providing a wide portfolio of high quality employment sites, whilst supporting the development of new key employment sectors, including the low carbon economy, and strengthening existing industry.”</i>

2.4 What’s the sustainability ‘baseline’ at the current time?

Another important step when seeking to establish the appropriate ‘scope’ of an SA involves reviewing the situation now for a range of sustainability issues. Doing so helps to enable identification of those key sustainability issues that should be a particular focus of the appraisal, and also helps to provide ‘benchmarks’ for the appraisal of significant effects.

A review of the sustainability baseline is presented within the SA Scoping Report (2014). This section presents a summary, updated as necessary.

BIODIVERSITY, FLORA & FAUNA

At present the site is largely undeveloped and is actively used as farm land in the most part, while approximately a quarter may be described as being previously developed land.

The areas surrounding the site along the northern boundary are largely low density residential while to the south green belt land dominates the landscape.

To the west, the site contains features such as Blakeney Woods which is a Local Wildlife Site (LWS) while a small section of the site to the east is part of the designated Green Belt. Natural England’s interactive online resource identifies Blakeney Woods along with the section of woodland immediately south as part of the Priority Habitat Inventory (PHI) (Deciduous Woodland). No other natural or ecological designations are located within the site boundary.

Natural England’s interactive online resource indicates that the Sunderland Growth Area is located close to (within 1km) a number of specific designated sites, specifically the Northumbria Coasts Special Protection Area (SPA) and Ramsar site and Durham Coast Special Area of Conservation (SAC)⁷. The interest features of these designations are summarised in Table 2.1. It should be noted that a draft Habitats Regulations Assessment (HRA) Screening Report has also been carried out in relation to the South Sunderland Development Area. This Report establishes in more detail the potential effects development is likely to have on adjacent designations and will be refined as the masterplan is developed.

The Northumbria Coast SPA and Ramsar both follow the same boundary running the length of the north east coastline between the Tweed and Tees estuaries. Parts of both sites are situated approx. 500m from the eastern boundary of the Growth Area. The coast is characterised by rocky shore platforms created by Magnesium Limestone cliffs, with headlands, boulders and sandy beach.

This area is also designated as a Special Area of Conservation (SAC), the boundaries of the two sites are the same in this location. The Durham Coast SAC is valued as the only example of vegetated sea cliffs of the Atlantic and Baltic Coasts on magnesium limestone in the UK⁸. Its designation should provide protection of habitats and species which are considered to be of community interest.

Table 2.1 – Summary of Interest Features for SAC and SPA within proximity to Sunderland Growth Area

European Site	Reasons for designation (Qualifying features)
Durham Coast SAC (Site code: UK0030140)	Vegetated sea cliffs of the Atlantic and Baltic coasts

⁷ Natural England ‘Nature on the map’ (accessed 2012) Available at <http://www.natureonthemap.naturalengland.org.uk/>

⁸ Magic Interactive Mapping Resource (accessed 2012) Available at <http://magic.defra.gov.uk/website/magic/>

European Site	Reasons for designation (Qualifying features)
Northumberland Coast SPA/Ramsar (Site code: UK9006131) Ramsar -(Site code: UK11049)	Wintering – Turnstone (<i>Arenaria interpres</i>) Wintering – Purple Sandpiper (<i>Calidris maritima</i>) Breeding – Little tern (<i>Sterna albifrons</i>)

The individual units which make up the Northumbria Coast SPA are also designated as sites of special scientific interest (SSSI). This is made up of coastal cliffs, all of which are exposed and not affected by sea defences. They are considered to be, in the main, in favourable condition⁹.

There are a further 16 SSSIs within the Sunderland administrative area covering an area of 105Ha. The results City of Sunderland LDF Evidence Base Topic Paper 1.7 Biodiversity (2009) indicate that 70% of the SSSIs were classified as in favourable condition¹⁰. Using an arbitrary buffer of 5km from the site to define proximity based on factors such as potential distances travelled for recreational purposes, five of these further Sunderland’s SSSIs are considered to be within proximity to the proposed Sunderland Growth Area. The details of these and Durham Coast SSSI are described in Table 2.2 below.

Table 2.2: Description and status of SSSIs in proximity to Sunderland Growth Area

SSSI	Location	Description	Current Status
Durham Coast	c. 1km east	Considerable biological, geological and physiographic interest. Contains most of the paramaritime Magnesian Limestone vegetation in Britain, species-rich dune system. Supports nationally important numbers of wintering shore birds and breeding little terns contributing to internationally important populations.	Favourable
Tunstall Hills & Ryhope Cutting	c. 1.5km North	Complex site of considerable geological and botanical interest. Geological interest centres upon rock exposures which occur on the Maiden Paps, in disused quarries and cuttings above the reclaimed Ryhope railway line. Botanically important species-rich grassland has developed on shallow soils overlying Magnesian Limestone.	Favourable
High Haining Hill	c. 1.5km South	Magnesian Limestone grassland. Small areas of short-grazed turf support communities of crested hair-grass <i>Koeleria macrantha</i> , sheep’s fescue <i>Festuca ovina</i> and common quaking grass <i>Briza media</i> in which blue moor-grass <i>Sesleria albicans</i> and glaucous sedge <i>Carex flacca</i> also occur. Elsewhere shallower soils support species such as common rock rose	Unfavourable recovering

⁹ Natural England, Durham Coast SSSI Citation (accessed 2012) Available at http://www.sssi.naturalengland.org.uk/Special/sssi/sssi_details.cfm?sssi_id=1000255

¹⁰ City of Sunderland LDF Evidence Base Topic Paper 1.7 Biodiversity (2009)

SSSI	Location	Description	Current Status
		<i>Helianthemum nummularium</i> , which is the food plant of the Durham Argus butterfly <i>Aricia ataxerxes</i> spp. <i>Salmacis</i> , a small colony of which occurs here.	
Herrington Hill	c. 2km West	Magnesian Limestone grassland communities, which are associated with undisturbed shallow soils. The main area of grassland supports a herb-rich community dominated by blue moor-grass <i>Sesleria albicans</i> and meadow oat-grass <i>Avenula pratensis</i> in which quaking grass <i>Briza media</i> , crested hair-grass <i>Koeleria macrantha</i> , red fescue <i>Festuca rubra</i> , glaucous sedge <i>Carex flacca</i> and spring sedge <i>C. caryophyllea</i> also occur.	Favourable
Hastings Hill	c. 3km North-west	The short-grazed turf on the hill and recolonised spoil associated with the disused quarry are of interest for their Magnesian Limestone communities. These are herb-rich communities dominated by blue moor-grass <i>Sesleria albicans</i> , meadow oat-grass <i>Avenula pratensis</i> , crested hair-grass <i>Koeleria macrantha</i> , red fescue <i>Festuca rubra</i> and quaking grass <i>Briza media</i> , including many herbs characteristic of Magnesian Limestone soils such as bird's-foot trefoil <i>Lotus corniculatus</i> . Of particular note are the large populations of felwort <i>Gentianella amarella</i> which grows on the western slopes of the hill, as well as the small population of pyramidal orchids <i>Anacamptis pyramidalis</i> associated with old earth works and spoil heaps on the floor of the disused quarry.	Favourable

In addition to the above SSSI's, the Tunstall Hills Local Nature Reserve (LNR) lies c. 1.5km to the north of the site.

Also of note is the presence of Halliwell Banks in close proximity to the site's eastern boundary which is a contaminated site and poses a risk to ground water in the area. This is an indirect consideration for the Growth Area site. As detailed in the Phase 1 Habitat Survey report of the City of Sunderland (June 2012).

Halliwell Banks was previously classified as unimproved neutral grassland but is now a mix of semi improved neutral and semi improved calcareous grassland.

Figure 2.1: showing location of designations overleaf.

The Sunderland Growth Area contains a number of habitats identified in the UK and/or Durham Biodiversity Action Plans such as Hedgerows, Woodland & Scrub and lowland meadows.

The majority of the Growth Area can broadly be categorised as farmland comprising of arable fields and pasture with occasional hedgerows and small woodlands (e.g. Blakeney Woods). These habitats will support a number of plant and animal species on site and may also provide a food source for off-site species, however the wintering birds from the nearby SPA are not likely to utilise the site in great numbers as neither are known for utilising inland habitats.

There are records of protected and Local Biodiversity Action Plan species in the area and its immediate surrounds, which include badger, bats and great crested newt. Development may have a negative impact on these and other features of nature conservation importance, including linking habitats.

LAND RESOURCES

Geologically, the Tyne and Wear area is relatively straightforward and is dominated by rocks from three main periods of geological history. At Sunderland this is mainly marine limestone and evaporates of Permian magnesium limestone that have been affected by glacial erosion and deposition during the Ice Age leaving thick deposits of till or boulder clay covering the solid geology.⁹

The majority of this framework site is currently arable farmland with limited ecological value. The site borders on the greenbelt (greenbelt to the south), with a small area of greenbelt within the site boundary. The Local Wildlife Site at Blakeney Woods is located within the site.

The Ryhope Coastline lies to the east of the site and forms part of the Northumbrian Coast Special Protection Area (SPA) and RAMSAR site. The coastline also supports part of the Durham Coast Special Area of Conservation (SAC) and Site of Special Scientific Interest designated for its geological and botanical importance.

The site has been identified as ‘permeable sandstone – potential for instability’. Instability can occur naturally in areas underlain by magnesium limestone mostly located in the east of the city where the site is situated. The soluble carbonates in the ground can create fault-lines and sinkholes which can lead to subsidence¹¹.

The unique chemistry of the magnesium limestone which is high in magnesium carbonate gives rise to soil conditions which support an interesting combination of plants, with grassland species along with rare plants. The soil in the growth area is characterised on the Soilscape international mapping resource as slightly acid loamy and clayey soils with impeded drainage.

The Natural England Agricultural Land Classification map for the North East Region (ALC001) has been reviewed. This map forms part of a series at 1:250 000 scale derived from the Provisional 1” to one mile ALC maps and is intended for strategic uses. This shows the land within proposed growth area being of ‘Land Predominantly in urban use’, associated with the adjacent developments, and Grade 3 (Good to Moderate) classification quality.

Other developments

There are other developments adjacent the site that will be considered in respect of cumulative impact, linkages and overall future development. These include (but are not limited to the following):

- Rushford Phase 2 residential development (10/03941/OUT);

¹¹ (Natural England ‘Nature on the Map’ Geological Description of Tyne and Wear [last accessed 2012])

- Ryhope General Hospital (11/03478/FUL);
- Ryhope Link Road (12/00572/FUL);
- Extra Care Doxford Park Estate (12/01283/FUL), and;
- Land At Silksworth Lane/Silksworth Road residential development (14/01461/OUT).

Ground Conditions

As part of any development in this area the applicant/developer will need to assess whether the site has been impacted by potentially contaminative land uses (both current and historic). National Planning Policy Framework (NPPF) paragraph 109 states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels water pollution. Government policy also states that planning policies and decisions should ensure that adequate site investigation information, prepared by a competent person, is presented (NPPF, paragraph 121).

The eastern edge of the proposed development area adjoins the Halliwell Banks contaminated land site. This site was inspected by Sunderland City Council under Part 2A of the Environmental Protection Act 1990 contaminated land regime. The inspection concluded that contaminants at this infilled quarry pose an unacceptable risk to groundwater underlying the site and the adjacent North Sea and SPA. As a result the site was determined as contaminated land by Sunderland City Council in November 2008. Sunderland also designated the site as a Special Site under Part 2A, and the Environment Agency therefore became the enforcing authority responsible for requiring its remediation.

Whilst Halliwell Banks does not affect the Growth Area site directly, it is recommend that consideration is given to the perception of living adjacent to the landfill when designing the layout of development at the eastern edge of the Growth Area.

Waste

Waste production in the north east of England is considered to be amongst the highest in England and Wales yet the region has one of the lowest recycling records¹². Table 2.3, adapted from ‘Model of Waste Arisings and Waste Management Capacity for the North East of England Waste Planning Authorities (July 2012)’ shows that, in Sunderland, the production of municipal waste (Local Authority collected waste) is expected to continue to grow from a baseline of 149,000 in 2011 to 169,000 tonnes by 2020.

Table 2.3: Municipal solid waste produced (tonnes)

Year	2011	2012	2013	2014	2015	2020
Municipal solid waste (tonnes)	149,000	150,000	152,000	156,000	158,000	169,000

Table 2.4 shows the year on year trend for recycling of municipal waste in the city. This illustrates an upward trend since 2002 when only 2% of waste was recycled or composted. However, the figure is still low when considering the fact that 98.90% of the local authority is served by kerbside collection of recyclables¹³.

¹² Sunderland LDF Topic Paper 1.13: Waste (2009)

¹³ DEFRA statistics

Table 2.4: Municipal solid waste recycled (percentage)

Year	2011	2012	2013	2014	2015	2020
Percentage recycled	33.2	35.3	38.8	45.4	46.3	50.6

It is a European requirement to reduce amount of waste sent to landfill and key aims of Sunderland City Council is to reduce the amount of biodegradable municipal waste land-filled by 75% from 1995 levels and increase recycling by 50% by 2020. To ensure that these targets are met the development framework for the SGA should heed the implications for production of municipal waste and where possible integrate with the Council’s recycling programme.

WATER QUALITY & RESOURCES

Water Quality

The Water Framework Directive (WFD) is European legislation designed to protect and enhance the quality of our rivers, lakes, streams, groundwater, estuaries and coastal waters, with a particular focus on ecology. The Environment Agency, lead authority on the WFD in England and Wales, have prepared the Northumbria River Basin Management Plan which includes actions to improve the water environment for waterbodies within the proposed growth area.

The Northumbria River Basin Management District is split into four catchments (Northumberland, Tyne, Tees and Wear). The proposed growth area is located in the Wear River Basin Catchment, this catchment covers the ‘*River Wear, which runs from the Pennines in and flows west to the estuary through Sunderland, and also includes southern coastal streams. The fish populations of the River Wear and its tributaries are generally of a high quality*’.

The Environment Agency’s Water for Life: River Basin Management Plan Northumbria River Basin District states that ‘*the legacy of the mining industry is still impacting on the quality of the groundwater, which has high concentrations of sulphate, sodium and nitrate and saline intrusion as well as failing quantitative status in some areas.*’

There are 68 river water bodies and 16 lakes in the catchment. The proposed growth area includes 3 Water Framework Directive river catchments:

- Doxford Park to Hendon Coastal Area – GB103024077640. This is a heavily modified waterbody – main pressures are agricultural and urban runoff;
- Ryhope Coastal Area – GB103024077610. This has moderate ecological status – main pressures are hydrology and water quality linked to flow issues and urban runoff; and
- Burdon to Ryhope Coastal Area – GB103025075990. This also has moderate ecological status – main pressures are agricultural and urban runoff.

A common sustainability theme across all Northumbria River Basin Management District catchments is diffuse agricultural and urban runoff. Urban surface water run off presents a diffuse pollution risk which can be managed through SUDS schemes that prevent pollutants reaching water bodies on a case by case basis. The SPD should therefore include a requirement for all proposals to fully include a SUDS scheme which will mitigate for any extra loading on these catchments, and even contribute towards them achieving good ecological status/potential. Ideally, the SUDS scheme would:

- Ensure that any urban run-off, particularly from new roads is fed into retention and treatment features;

- Look to incorporate poor surface water drainage from any of the neighbouring areas into these new SUDS features to help address existing reasons for failure;
- Develop green infrastructure that doesn't require artificial nutrients for establishment and maintenance;
- Identify surface water flow routes within the site, look to protect and incorporate these into a green infrastructure plan for the development; and
- Look to link green infrastructure in the surrounding area and existing wildlife corridors.

Groundwater

The Wear catchment contains two groundwater bodies, the Wear Magnesian Limestone groundwater body and Wear Carboniferous limestone and Coal Measures ground water body. All of the growth area lies on the Magnesian Limestone principal aquifer with large areas located within a currently designated groundwater Source Protection Zone (predominantly SPZ 2, but also within SPZ 1 and 3). The Magnesian Limestone aquifer is a principal aquifer, a highly sensitive environmental receptor and is an important source of water for a large number of public, private and industrial supplies (Sunderland Flood Risk Assessment 2010 (SFRA)).

Flood Risk

The entire area lies in flood zone 1 (as identified in the SFRA) and as such is at the lowest risk of fluvial or tidal flooding.

The western area lies in a critical drainage area, but the SFRA indicates that this is because “*significant future work is required to understand the level of current and future risk to the community*” resulting from flooding of Hendon Burn, and the contributing urban surface water drainage system or surface water runoff.

As the development site will be over 1 hectare, a Flood Risk Assessment (FRA) will need to be submitted with any planning application to demonstrate how surface water will be managed, and to consider other sources of flooding, in accordance with the Technical Guidance to the National Planning Policy Framework (page 3).

The SPD should include a SUDS policy requiring all development to investigate and make use of sustainable forms of drainage to store and attenuate surface water drainage wherever possible. This should make reference to the Approved Document Part H of the Building Regulations 2000 which states that the first option for surface water disposal should be the use of sustainable drainage methods (SUDS) which limit flows through infiltration e.g. soakaways or infiltration trenches, subject to establishing that these are feasible, can be adopted and properly maintained, and would not lead to any other environmental problems.

Any proposed surface water discharge to sewer should also be attenuated as much as possible to allow for the required growth and reduce the pressure on existing sewer systems.

Consideration should be given to restricting or preventing surface water discharge to the sewer wherever SUDS can be used to deal with surface water run-off instead. It is recommended that the proposals are discussed with Northumbrian Water Limited (NWL) to identify any potential issues and whether these need to be highlighted in the SPD.

AIR QUALITY AND NOISE

The site lies to the south of the built up area, and is less than 3 miles from Sunderland City Centre. It is bound to the west by the A19 trunk road and Doxford Business Park, and as a result there are a number of sources affecting air quality and noise.

The last updating and screening assessment of air quality in Sunderland was carried out in 2012¹⁴ in accordance with the Environmental Act 1995. Sunderland City Council have been assessing the air quality in their area for over 10 years through the Review and Assessment framework and this is the fourth Updating and Screening Assessment that has been undertaken. A major change to the approach to Updating and Screening Assessment is that the assessment is now carried out on a source-by-source basis, rather than considering each pollutant in turn.

Sunderland City Council has no existing AQMA's within its boundary. Monitoring has continued across the city focusing on potential known hotspots and areas where new development could introduce new receptors. The results from the automatic NO2 monitoring data were that both the annual and hourly mean was met at both monitoring sites (Trimdon Street and the Puma Centre). The results from the non-automatic monitoring were that the annual mean was met at all sites apart from two (Stockton Road and North Bridge Street)¹². The Updating and Screening Assessment has therefore identified the need to proceed to a Detailed Assessment for Nitrogen Dioxide at relevant locations.

The main source of noise pollution in Sunderland is also transport related caused by traffic on major roads. To a lesser extent industrial noise, night-time disturbances from pubs and clubs and noise caused by events such as sports events and exhibitions can all have a detrimental impact on noise levels.

DEFRA's interactive noise mapping website does not contain data for this area of Sunderland. Located adjacent predominantly residential areas to the north, potential sources of noise pollution are the main roads including the A19, A1018, B1286, and Burdon Lane, as well as access roads within the neighbouring residential areas.

CLIMATIC FACTORS, FLOODING & ENERGY RESOURCES

The north east region's climate is strongly influenced by two principal factors:

- Altitude; and
- Proximity to the coast.

Sunderland's location and geography give the city and its surrounding a unique set of weather patterns. (And the Weather today is ...Climate Change in the Northeast (2002)¹⁵,

Sunderland's coastal setting provides cool summers and mild winters compared to other more inland conurbations in the North East, such as Durham City or Newcastle. The moderating influence of the North Sea is noticeable in summer, when it's not uncommon that Sunderland can be 2 °C cooler than Durham or Newcastle.

The coastal setting also means the Sunderland receives less cloud cover, and hence greater sunshine hours than many other cities in Central and Northern England and Scotland. And like much of the east coast of the UK, average annual rainfall received is low, by UK standards.

The baseline rainfall, snowfall and frost also vary across the region, and this is attributable to altitude. Greater rainfall, snowfall and frost occur in upland areas compared with the lowlands and coastal locations as at the Seafrost.

¹⁴ Local Air Quality Management Updating and Screening Assessment 2012, Sunderland City Council

¹⁵ And the Weather today is ...Climate Change in the Northeast (2002),

Climate change future scenarios are predicted for regional level through UKCIP09 future scenarios generator. The UK Climate Projections (UKCP09)¹⁶ are the latest generation of climate information for the United Kingdom.

UKCP09 uses 30-year time periods for both the baseline climate and for all future climate projections. The projections are reported for seven overlapping 30-year time periods. Each future time period is named based on the decade upon which it is centred.

UKCP09 time periods:

- 1961 to 1990 – the baseline period;
- 2010 to 2039 – the 2020s;
- 2020 to 2049 – the 2030s
- 2030 to 2059 – the 2040s;
- 2040 to 2069 – the 2050s;
- 2050 to 2079 – the 2060s;
- 2060 to 2089 – the 2070s;
- 2070 to 2099 – the 2080s

The key implications/predictions for the North East in 2080 include:

- Average annual temperature increases
- Reduction in snowfall
- Increase of sea temperatures around all coasts
- Increase in length of thermal growing season

More locally, The North East Climate Change Adaption Study (2008), UK Climate Impacts Programme, The Climate Change Partnership¹⁷, shows specific trends in the River Wear Catchment. The most significant changes in the climate by the 2050s across the Wear catchment are forecast to be:

- Increases in average and extreme temperatures(average 1.8°C), with extreme hot summer temperatures (increases around 2.2°C);
- Increases in the number of heatwaves;
- Decrease in average rainfall over the course of a typical year, but with a significant increase in winter rainfall and reductions in spring, summer and autumn rainfall; and
- A notable reduction in winter snowfall.

¹⁶ The UK Climate Projections (UKCP09)

¹⁷ The North East Climate Change Adaption Study (2008), UK Climate Impacts Programme, The Climate Change Partnership

Recorded changes in climate

Local weather records (And the Weather today is ...Climate Change in the Northeast (2002)¹⁸, do show that temperatures in the North East have increased by 0.5°C over the past 150 years. Based on charting of rainfall in Durham between 1880 and 2000, however, there is no evidence to suggest that average annual rainfall in the North East is increasing. There is a trend towards wetter winters, however, with the proportion of rain increasing in that season.

There has been an increase in recent extreme weather events which have inflicted damage across the North East region causing disruption to services and damage to buildings and infrastructure. Most typically it is severe rain and strong winds that have caused the greatest impacts, particularly relating to road traffic accidents, flooding, direct building damage and road blockages.

Increased severe storms and rainfall have had an impact on rising sea levels. In more recent years the consequences of extreme heat events have also been noticeable across the region, causing increased mortality rates, exacerbating health problems and leading to an increase in incidents of wild fire during heatwaves.

Emissions and efficiency

The key cause of anthropogenic climate change is widely acknowledged to be the release of greenhouse gases into the atmosphere from the combustion of fossil fuels. Increased greenhouse gases in the Earth’s atmosphere create an enhanced warming effect. There are a number of indicators that can be used to investigate the emissions of greenhouse gases of an area. In particular energy consumption and efficiency and flooding provide useful indicators.

In 2012, Sunderland produced about 1,684,400 tonnes of carbon dioxide; 37% from housing, 39% from public and commercial organisations and 24% from transport¹⁹. A further 165,000 tonnes of methane were produced from waste.

Waste levels have only increased by 0.2%, or 2,500 tonnes, between 2001 and 2006. However, due to the decrease in population over this period, emissions per capita are over 1% higher in 2001 than 2006. Table 2.5 below does show a substantial decrease in emissions per capita since 2005 which could be a result of increasing preventative measures. Traffic increases, new housing and planned regeneration are likely to increase emissions further by 2021, up to 9%, if no action is taken²⁰.

Table 2.5: CO₂ Emissions for Sunderland (tonnes)

Year	Industry and Commercial (kt)	Domestic (kt)	Transport (kt)	Grand Total (kt)	Population ('000s, mid-year estimate)	Per Capita Emissions (t)
2005	840.6	726.0	455.6	2,026.1	279.2	7.3
2006	833.4	708.3	453.5	1,999.0	278.4	7.2
2007	760.3	678.6	457.3	1,899.8	277.8	6.8
2008	726.6	672.5	431.8	1,834.3	276.8	6.6
2009	633.1	606.9	414.3	1,657.6	276.2	6.0
2010	671.7	650.0	404.8	1,729.6	276.0	6.3
2011	608.3	567.4	400.8	1,579.6	275.3	5.7
2012	658.3	625.8	397.2	1,684.4	275.7	6.1

¹⁸ And the Weather today is ...Climate Change in the Northeast (2002)

¹⁹ 2005 to 2012 UK local and regional CO2 emissions: full dataset

<https://www.gov.uk/government/statistics/local-authority-emissions-estimates>

²⁰ A Climate Change Plan for Sunderland (2008)

Flooding

A Strategic Flood Risk Assessment was carried out for Sunderland in 2010.

The entire area lies in flood zone 1 and as such is at the lowest risk of fluvial or tidal flooding.

The western area does lie in a critical drainage area, but the SFRA indicates that this is because “*significant future work is required to understand the level of current and future risk to the community*” resulting from flooding of Hendon Burn, the contributing urban surface water drainage system or surface water runoff.

The masterplan will need to consider flood risk when allocating land uses and regeneration projects.

There is some evidence that flash flooding is also becoming more common as a result of increasing precipitation intensity, for instance in the July 2001 thunderstorm at Hexham, in Northumberland, a gauging station that had been in place for thirty years was washed away. Table 2.6 illustrates that recent flooding events in the North East have escalated since 1995.

Table 2.6: Recent flooding events in the North East (North East Climate Change Adaption Study)

Date	River Flooding
1995	River Tyne
1995	River Wear
June 2000	River Gaunless (1 in 100 year flood event, 400 properties flooded at South Church & West Auckland)
November 2000	River Pont (1 in 16 year flood event, 147 properties flooded at Ponteland) River Tees River Gaunless
February 2001	River Tees River Gaunless
January 2005	River Tyne
June 2005	North Tyneside
August 2006	Newcastle
June 2007	18 incidents, Blythe
July 2007	Tynedale, River Tyne

Climate change responses

Sunderland City Council and Sunderland Partnership are signatories to the Nottingham Declaration on Climate Change, which commits the city to developing a plan to tackle the causes and effects of climate change.

To address all the above issues and to ensure that the city makes an equitable contribution to the targets set by the government in the recent Climate Change Bill, Sunderland City Council have consulted on and developed a Climate Change Action Plan (published in November 2008)²¹, and updated in Progress Report 2010²².

¹⁹ Sunderland Climate Change Action Plan (2008)

Options have been identified that could cut carbon emissions by over 500,000 tonnes per annum, offsetting predicted increases, and reducing emissions further to 15% below 2001 levels. Of these, about one third of the reduction should come from planned installation of methane capture on landfill sites and government targets on introduction of renewable fuels (into national grid electricity and road transport fuels).

HERITAGE & LANDSCAPE

Landscape

The Sunderland Growth Area has a varying landscape character.

A number of policies in Sunderland's UDP which was adopted in 1998 (and reviewed in 2007) as well as the 2009 UDP Alteration No. 2 set out the Council's approach towards conserving and protecting the landscape.

The Countryside Agency's Countryside Character Initiative maps England into 159 separate, distinctive character areas within which more local character areas sit. Sunderland crosses two of these: Tyne and Wear Lowlands and the Durham Magnesian Limestone Plateau; the Sunderland Growth Area is contained within the latter. Natural England has published updated National Character Areas (NCAs) and the site is contained within the Durham Magnesian Limestone Plateau (NCA 15). The Natural England guidance describes this area as

'An open, agricultural landscape with sharply defined boundaries in the form of a steep limestone escarpment to the west and a dramatic coast of limestone cliffs, headlands and bays to the east'

'Rural land cover consists of arable land and grazing pasture, with small, isolated areas of wildlife-rich habitat such as Magnesian Limestone grassland and ancient woodland in the narrow valleys (or denes) running down to the coast. The coast is an important breeding and feeding area for migratory birds, and harbour porpoise frequents inshore waters. The area has been strongly shaped by its industry, with coal mining and quarrying in particular leaving a very clear mark on local landscapes and identity. Settlements range from larger urban areas such as Sunderland to the north and ex-mining towns with their distinctive terraces to the south and east, to scattered traditional stone villages built around village greens on the plateau and 'New Towns' such as Peterlee and Newton Aycliffe. Local nature reserves and a good access network, particularly along disused colliery railways and the coast, provide local residents with good opportunities for outdoor recreation.'

On a local level, much of the Sunderland Growth Area is rural in nature and is undeveloped. The north and east of the site boundary is predominantly surrounded by urban settlements (including Ryhope, Doxford Park) whilst the southern boundary is directly adjacent to green belt land.

In addition to the above, Sunderland's Green Infrastructure Strategy Framework (2011) identifies a portion of the site as 'District Corridors' as illustrated below in Figure 2.2. These features clearly illustrate the predominantly rural nature of the landscape within the site boundary and its immediate surrounds.

¹⁹ Sunderland Climate Change Action Plan Progress Report 2010



Figure 2.2: Green Infrastructure Corridors (Source: Sunderland’s Green Corridor Strategy Framework (2011))

LDF topic paper 1.10 Countryside (2009) also shows that the Sunderland Growth Area is designated as ‘Countryside’, ‘Urban Area’, ‘Existing Important Settlement Breaks and Green Wedges’ or ‘Existing and Potential Other Breaks and Wedges’ which reflects the diverse landscape character of the site.

Heritage

The Sunderland Council area contains a number of historic assets and built heritage. Table 2.7 below provides figures as recorded at 2012.

Table 2.7: Heritage Assets in Sunderland (Source: English Heritage, Understanding the Assets, <http://hc.english-heritage.org.uk/content/pub/2012/understanding-assets-2012.xls>)

Designation	Number in Sunderland
World Heritage Sites	0
Scheduled Monuments	9 (with 1 shared by a neighbouring authority)
Listed Buildings – Grade I	10
Listed Buildings – Grade II*	16
Listed Buildings – Grade II	340
Conservation Areas	14
Historic Parks & Gardens	2 (both Grade II)
Registered Battlefields	0

It should be noted that the following Scheduled Monuments are in close proximity to the site:

- Ryhope Pumping Engines (listing number 1005916) is located adjacent to the site at the east; and
- Hasting Hill Cursus and Causewayed Enclosure (listing number 1016977) is located to the north west of the site.

There are no listed buildings located within the Sunderland Growth Area, reflecting the largely rural nature of the site. There is however, a number of surrounding listed buildings which include the following:

- Tunstall Lodge (Grade II ,listing number 1354975);
- Superintendent’s House, South West of the Ryhope Pumping Station (Grade II, listing number 1218132);
- Former Worker’s Cottages and Stables/Coach House of Ryhope Pumping Station (Grade II, listing number 1390597);
- Walls, Piers, Gates and Railings South of Ryhope Pumping Station (Grade II, listing number 1207134);
- Chimney to West of Boiler House at Ryhope Pumping Station (Grade II*, listing number 1207133);
- Engine House and Boiler House at Ryhope Pumping Station (Grade II*, listing number 1218116);
- Cooling Ponds to North and South and Reservoir to East of Ryhope Pumping Station (Grade II, listing number 1292116);

The Ryhope Engine Museum site, including the scheduled monument and listed buildings, is highly significant in heritage and historic landscape terms with immediate and wider landscape significance.

No Conservation Areas are within or directly adjacent to the site boundary, with the nearest Conservation Area being Ryhope Village which is located within 1km to the east of the site. Silksworth Hall Conservation Area is also located c.1km to the north of the site.

A search of the of the Historic England PastScape, Durham and Northumberland Historic Environment Record (Keys to the Past website <http://www.keystothepast.info/Pages/home.aspx>) has been undertaken to identify non-designated, locally important, heritage assets both within and in close proximity to the study area. This search identified approximately 47 non designated heritage assets within, or in close proximity to the study area.

Five small archaeological sites are known to exist within the study area. These are located within Cherry Knowle, to the east and west of Nettles Lane and South Ryhope.

COMMUNITY HEALTH, EQUALITY & EDUCATION

Population

Based on 2011 Census information, the population of Sunderland is currently around 275,700. This equates to around 10.6% of the total population of the north-east of England (2,602,300). Future projections from the Office of National Statistics (Interim 2012-based sub-national population projections for England) indicate that the population of England will grow by approximately 3.8 million by 2022 (7.2%). Over the same period, the North-East is projected to grow at a slower rate of of 2.9%, showing an increased population of 75,900 to 2,678,200. Sunderland is expected to grow at a slower rate of 0.8% (ONS Population projections 2012 based sub-national population projections for England). Table 2.8 demonstrates the rate of growth in the region.

Table 2.8: Real and Predicted Population Change in Sunderland and Region

	2012	2022	% change
England	53,493,700	57,337,800	7.2
North East	2,602,300	2,678,200	2.9
Sunderland	275,700	278, 000	0.8

The South Sunderland Growth Area borders the Sunderland Doxford and Ryhope electoral wards and is located within the Sunderland East political boundary which has a population of 55,907²⁰. Based on 2011 Census information, Doxford and Ryhope are amongst the least densely populated areas in the local authority area with Ryhope (10,484) and Doxford (9,870) combined accommodating around 20,300 people, which equates to approximately 7% of the Sunderland city population.

The majority of the population in the Sunderland East area are of working age between the ages of 16 and 64 (around 68.9%)²³. The population is predominantly white (90.2%), a slightly lower percentage than the overall total of 95.9% for the whole of Sunderland²⁰.

Deprivation & Social Exclusion

The overall Index of Multiple Deprivation (IMD) assessment for 2010 places 34 Sunderland lower super-output areas (LSOAs) comprising 18% of the city's total of 188 LSOA's, and housing almost 17% of its residents) among England's 10% most disadvantaged lower super

²³ Sunderland City Council – 2011 Census Fact Card: Sunderland East
 SUSTAINABILITY APPRAISAL REPORT
 September 2015

output areas. This continues the downward trend observed from 2004 to 2007, when the number of local LSOAs in the national upper decile fell from 51 (27% of the city total, containing also 27% of its population) to 41 (22% of city LSOAs housing 21% of all residents)²⁴.

A similar situation is evident when considering the number of Sunderland LSOAs ranking within the 20% most deprived areas nationally on the IMD. In the 2004 index there were 87, 46% of the city total and containing 46% also of its inhabitants. The 2007 outputs show a reduction to 82 (44% of LSOAs, 43% of residents) while the 2010 IMD records only 70 (37% of LSOAs, 36% of residents) within the national upper quintile. Clearly, the incidence of multiple deprivation across Sunderland remains significantly heightened compared to England as a whole, but it has shown an encouraging relative decline over the seven year period embraced by the 2004, 2007 and 2010 IoD data inputs)²⁵.

Although the majority of the proposed Sunderland Growth Area is currently arable land with limited population, the area falls within the Sunderland East Local Area Plan area which comprises the wards of Doxford, Ryhope, St Michaels, Millfield and Hendon. There are 36 LSOAs in the Sunderland East Local Area Plan area. 8 of these areas are in the top 10% most deprived areas in England and contain 19.8% of the Sunderland East area population. 15 LSOAs are in the top 20% most deprived and contain 38.9% of the area population²⁶.

Data for the Nomis Ryhope labour market ward²⁷ which contains the Sunderland Growth Area, records that in May 2015, 2.6% of the labour market ward resident population aged between 16 and 64 years of age claimed Job Seeker's Allowance which is lower than the average for Sunderland (3.1%) but higher than the G.B. average of 1.8%. However when considering changes in claimant numbers over the period between 2011 and 2012, East Sunderland has demonstrated one of the lowest increases at 10.2% of all five Sunderland Local Area Plan areas. This rate of increase is also below that of the City as a whole at 12.3%. East Sunderland was also the only area to show individual ward decreases in the number of claimants between 2011 and 2012. This was the case in Doxford (-4.5%) although an increase occurred in the Ryhope ward (+3.6%)²⁸.

The Sunderland Partnership "Giving Every Child an Equal Chance" report²⁹ states that the levels of Child Poverty, for those aged 0-19, across Sunderland, varies from 1.9% to 73.8%.

According to the latest data³⁰, 28.5% of children residing in the East Sunderland area are classified as living in poverty. This is greater both than the overall figure for Sunderland (25.9%) and is the highest of all five Local Area Plan areas in the city. At a lower level, however, there are more substantial differences in child poverty rates with Doxford demonstrating one of the lowest rates (13.9%).

In terms of housing tenure, around 54.9% of housing in the Sunderland East area is owner occupied with 21.1% in private rental. 22.7% of housing is socially rented, 0.4% is in shared ownership and 0.9% of occupiers are living rent free³¹.

50% of the Sunderland city housing was built before 1964. In 2001 80% of the stock was terraced or semi-detached, 12% had 3 or fewer rooms and 78% were in the lowest Council Tax bands A and B. Only 0.5% are in the highest bands G and H³². Within the Sunderland

²⁴ Sunderland City Council – Indices of Deprivation 2010: Summary of Outcomes for Sunderland

²⁵ Sunderland City Council – Indices of Deprivation 2010: Summary of Outcomes for Sunderland

²⁶ Sunderland City Council – Sunderland East Local Area Plan (2009-2011)

²⁷ Nomis – Ryhope Ward Labour Market Profile [last accessed June 2015]

²⁸ Sunderland City Council – Economic & Life Chances Profile (East Sunderland)

²⁹ Sunderland Partnership – Giving Every Child an Equal Chance

³⁰ Sunderland City Council – Economic & Life Chances Profile (East Sunderland)

³¹ Sunderland City Council – Sunderland East Fact Card

³² Sunderland Partnership – Sunderlandfor a Better Future (The Sunderland Strategy 2008 – 2025)

East area, around 74.5% of dwellings are houses or bungalows with the remaining 25.5% being flats, maisonettes or apartments³³.

4.6% of households in the Doxford ward and 4.4% of those in the Ryhope ward are in housing need which is less than the average of 6.6% for Sunderland as a whole³⁴. Analysis of the general Sunderland housing market supply and demand suggests that across the city, there are a series of market pressures which vary by locality, property type and tenure.

10.3% of households in the Southern Suburbs Local Housing Market Area – which includes the Doxford, and Ryhope wards – are in housing need which is less than the average of 12.4% for Sunderland as a whole³⁵. Analysis of the general Sunderland housing market supply and demand suggests that across the city, there are a series of market pressures which vary by locality, property type and tenure.

Overall, there is generally some pressure on all types of housing, with particular pressures within certain wards. Only two of the Local Housing Market Areas – including Southern Suburbs - exhibit close to a balance between supply and demand. The 2012 Strategic Housing Assessment analysis points to a need for Sunderland to diversify its provision of market housing – with a particular priority to increase the number and range of houses to reflect underlying public aspirations.

Based on past trends evidenced from a 2012 household survey, the Sunderland 2012 Strategic Housing Assessment study analysis projected a household formation rate of 1,677 units each year. This is determined using a national household formation rate estimate of 1.4% of all households (using the 2009/10 figure reported in the Survey of English Housing). The Sunderland Strategic Housing Land Availability Assessment (2013)³⁶ identifies South Sunderland as having a key role in meeting future housing demand in the city whilst the Core Strategy³⁷ identifies four Locations for Major Development (LMDs) within the South Sunderland area which collectively account for a potential 2,800 to 3,300 new dwellings over the next 20 year period.

Health

The information in this section is drawn from the Audit Commission's 2009 "Sunderland Area Assessment"³⁸ and the Sunderland East Local Area Plan (2009-2011)³⁹. On average, Sunderland residents have shorter lives and die earlier (76.4 years) than the country as a whole. Residents in the Doxford ward (78.9 years) live longer than the City average of 76.4 years whilst residents in the Ryhope ward (76.4 year) are on a par with the city average.

Deaths from smoking and early deaths from cancer, heart disease and stroke in Sunderland are all worse than national averages although action to improve health has been underway for a number of years, and overall death rates in the last 10 years have reduced. Mortality rates from both cancer and circulatory diseases in the Ryhope ward is lower than the city averages. Whilst the Doxford ward has a lower mortality rate from circulatory diseases than the Sunderland average, deaths from cancer is higher than the city average.

24% of residents within the city of Sunderland have limiting long-term illness (19.4% are people of working age). Within the Sunderland East Local Area Plan area, the Ryhope ward (25.8%) has a higher percentage of people of working age with long-term illness than the Sunderland average.

³³ Sunderland City Council – Sunderland East Fact Card

³⁴ Sunderland City Council – 2008 Strategic Housing Market Assessment

³⁵ Sunderland City Council – 2012 Strategic Housing Market Assessment

³⁶ Sunderland City Council – Strategic Housing Land Availability Assessment 2013

³⁷ Sunderland City Council – Core Strategy

³⁸ Audit Commission – Sunderland Area Assessment (2009)

³⁹ Sunderland City Council – Sunderland East Local Area Plan (2009-2011)

Death rates from alcohol related causes in Sunderland are higher than those for the North East as a whole. The number of people dying from chronic liver disease is increasing. Hospital treatment for alcohol-related conditions is a major issue. Alcohol harm-related hospital admissions increased to 2,379 per 100,000 of population in 2008.

25% of residents in Sunderland smoke. The percentage of Doxford ward residents who are smokers is less than the city average (19%) but it is higher amongst Ryhope ward residents (29%).

In terms of children's health, obesity in children of primary school age (11-year olds) in 2008/09 was 21 per cent in Sunderland compared to the national average of 18%. The percentage of adults in Sunderland who self report being obese (which means having a BMI of 30% or over) is 18%. Both the Doxford and Ryhope wards have adult obesity levels on a par, or lower, than the city average - with levels of between 15% and 18%.

Crime

Table 2.9 lists the number of crimes recorded by the police for the Sunderland City Council local authority area in comparison to England⁴⁰.

Table 2.9 Crime Statistics

Crime Type	Sunderland City Council	England
Burglary & Theft	5,839 (27.4%)	980,998 (29.5%)
Sexual Offences	207 (1.0%)	51,253 (1.5%)
Violence Against Persons	4,492 (21.1%)	781,875 (23.5%)
Criminal Damage	6,186 (29.0%)	615,885 (18.6%)
Robbery/Fraud/Forgery	669 (3.1%)	213,042 (6.4%)
Drug Offences	1,270 (6.0%)	214,473 (6.4%)
Other Offences	2, 636 (12.4%)	469,241 (14.1%)
Total Crimes	21,299 (100.0%)	3,326,767 (100.0%)

Therefore within the Sunderland City Council area, criminal damage accounted for the highest proportion of all crimes (29%) which was higher than the average for England. Sexual offences accounted for the lowest proportion of criminal acts in the Sunderland City Council area (1.0%) which is the slightly lower than the average for England (1.5%).

Total crime in the Sunderland East Local Plan area was 7745 incidents during 2008/09 which equates to 142 incidents per 1000 population⁴¹. This is higher than the Sunderland city rate of 82.5 incidents per 1000 population. However, in relation to specific wards the crime rate in both Doxford (42.4) and Ryhope (67.5) is significantly lower than both the Sunderland East and the city averages.

Residents in the Sunderland East Local Plan area consider that there are number of anti-social behavioural problems in their area including:-

- Noisy neighbours and loud parties
- Vandalism, graffiti and other deliberate damage to property or vehicles
- People using or dealing drugs
- People being drunk or rowdy in public places.

⁴⁰ The Home Office – Recorded Crime Data at Local Authority Level

⁴¹ Sunderland City Council – Sunderland East Local Area Plan (2009-2011)

Education

Both the Ryhope and Doxford wards have a number of schools e.g. Saint Paul’s Church of England Primary School, Ryhope St. Patrick’s RC Primary School, Ryhope Junior School, Benedict Biscop Church of England Primary School, Doxford, Portland College (students with learning difficulties) and the City of Sunderland College (The Teleport campus, Doxford Park – a work Based Employment & Learning Centre).

The percentage of young people in East Sunderland achieving Key stage 2 English & Maths level 4+, increased from 71% to 78% between 2010 and 2011. This exceeds both the City and National average level of attainment of 74% in 2011 and is the highest attainment level at this stage of all five Local Area Plan areas in the city. Schools in Ryhope (Ryhope Junior – 76%) and Doxford (Benedict Biscop – 97% and Mill Hill – 89%) exceeded the city and national averages⁴².

The proportion of young people in the East Sunderland area, achieving at least five GCSEs or equivalent at grade A*-C (including English & Maths) decreased slightly from 59% in 2010 to 58% in 2011. Despite this, the East continues to have the highest attainment at this level of all the five Local Area Plan areas in the city. Of the secondary schools in the East Sunderland area, all but one exceeded the City and National average attainment levels of 55% and 58% respectively in 2011³⁹.

9.3% of the resident population in Sunderland (academic year 12-14), were not in education, training or employment (NEET), at the end of November 2011⁴³. Of the East Sunderland wards, Doxford had the second lowest proportion of NEET’s across the city whilst Ryhope (8.3%) was also lower than the city average.

However, the Ryhope ward has a relatively good percentage of its resident population in full-time education (4.95-5.80%) compared to student populations in wards elsewhere throughout Sunderland.

In 2011, only 22% of the residents of the Sunderland City Council area (16-64 years) were qualified at National Vocational Qualification (NVQ) Level 4 or above. This is lower than the averages for both the North East (26.5%) and Great Britain (32.9%). In addition, 12.8% of the city’s population (16 to 64 years) had no qualification – which is higher than the average for the North East (12.2%) and Great Britain (10.6%)⁴⁴.

Qualifications levels for Sunderland East are outlined below and based on the resident population aged between 16-74 years of age³⁰.

Table 2.10: Sunderland East Qualifications (2011)

Qualifications (All People Aged 16-74 as % of Total Population)	Sunderland East* (%)	Sunderland (%)	Great Britain (%)
No Qualifications	26.3	44.4	35.8
Lower Level Qualifications	42.7	43.6	43.9
Higher Level Qualifications	26.8	12.0	20.4

The data shows that the proportion of the Sunderland East population (16-74 years) with no qualifications is lower than the Sunderland city average and the average for Great Britain. Effectively, approximately 70% of people aged between 16 and 74 years of age in the Sunderland East area have a qualification of some description.

⁴² Sunderland City Council – Economic & Life Chances Profile (East Sunderland)

⁴³ Sunderland City Council – Economic & Life Chances Profile (East Sunderland)

⁴⁴ Nomis – Sunderland Labour Market Profile [last accessed October 2012]

*Note that % will not add up to 100 as pupils still in school are not counted

LOCAL ECONOMY & EMPLOYMENT, INCLUDING TOURISM

Historically economic growth and decline in Sunderland have been subject to acute levels of demographic change with key drivers influencing the economic growth of the city⁴⁵. In the 19th and 20th centuries, the key drivers of the economy in Sunderland were focused on mining and new heavy industries such as shipbuilding.

However, since the late 1980's, Sunderland has replaced and exceeded the number of jobs lost through the decline of those industries. The city has attracted major international businesses, such as Nissan, Barclays, Nike and Berghaus. It has also developed strengths in new industries including financial and customer services which have led the growth in jobs, basing themselves in out-of-town business parks e.g. Doxford International. Other jobs have come from the expansion of the University of Sunderland, shopping in the city centre and new software enterprises⁴⁶.

The Sunderland Economic Masterplan sets out a shared public/private stakeholder partnership economic development vision and aims for the city to 2025⁴⁷. The overall economic development vision is for Sunderland to become “an entrepreneurial University City at the heart of a low-carbon regional economy” and that this will be achieved through five key Aims:

- Sunderland becoming a vibrant, creative and attractive city, with a strong learning ethic and a focus on developing and supporting enterprise, with the University of Sunderland at its heart;
- Using the opportunities offered by new low-carbon technologies to stimulate economic activity in Sunderland and for the city to become a national “hub” of the low carbon economy;
- Creating a prosperous and well-connected waterfront city centre;
- Achieving an inclusive city economy that improves opportunities for people of all ages and sections of the Sunderland community – and which targets unemployment in particular; and
- Adopting a “one city” approach to economic leadership.

Currently, four employment sectors within Sunderland represent over three quarters of all jobs - public administration, education and health (30.5%), retail and leisure (20.1%), manufacturing (14.9%) and financial and related business services (14.2%)⁴⁸.

The majority of the Sunderland workforce is employed in the Services sector (74.7%) although this number is still considerably lower than the averages for both the North East (82.5%) and Great Britain (85.7%). However, within the ONS Ryhope labour market ward (*in which the proposed Sunderland Growth Area is located*) only around one-third (33%) of Ryhope residents in employment are working in the services sector. The number of staff still employed in manufacturing jobs in Sunderland (17%) remains higher than the averages for both the North East (10.9%) and Great Britain (8.5%)⁴⁹. The percentage of self-employed people in Sunderland is relatively low at around 5.8% compared with the average for the North East of 6.3% and the national average of 9.1%⁵⁰.

⁴⁵ Sunderland LDF Topic Paper 1.1: Economy (2007) Available at:

⁴⁶ Sunderland City Council – A Brief History of Sunderland’s Economy
www.sunderland.gov.uk/index.aspx?articleid=6423

⁴⁷ Sunderland Economic Master Plan “Smart & Sustainable”

⁴⁸ Sunderland Economic Master Plan “Smart & Sustainable”

⁴⁹ Nomis Labour Market Profile – Sunderland [*last accessed June 2015*]

⁵⁰ Sunderland Economic Master Plan “Smart & Sustainable”

Sunderland's labour force supplies local demand in the main. Travel-to-work data shows that 80% of those who work in the city also live in Sunderland, with the majority of these workers travelling less than 10km. This indicates that there is limited penetration into external labour market sources from the Sunderland labour market and that the connections between Sunderland's labour market and the wider North East economy are underdeveloped⁵¹.

In 2014, the gross weekly wage in Sunderland for full-time workers (£456.50) remained lower than the average for the North East (£477.10) and Great Britain (£520.80) whilst the hourly pay for full-time workers in the city is also lower than the regional and national averages⁵². According to recent unemployment figures 18% of all job seekers allowance claimants across the City reside in the East Sunderland area. The rate of claimants of the 16-64 resident population in East Sunderland area is significantly higher than the overall rate for Sunderland and is the highest amongst the five city Local Area Plan areas⁵³.

However, there are variations in this picture at the "sub-East Sunderland" area level as data for the Nomis Ryhope labour market ward⁵⁴ (*which contains the Sunderland Growth Area*), records that in May 2015, 2.6% of the Ryhope labour market ward resident population aged between 16 and 64 years of age claimed Job Seeker's Allowance - which is lower than the average for Sunderland (3.1%) but higher than the G.B. average of 1.8%. Aim 3 of the Sunderland Economic Masterplan (2010) is to improve the performance of Sunderland city centre as an economic "motor" for the city and wider region. This Aim is built from the belief that city centres are important drivers of city economies and are "*often the best locations for knowledge businesses, advanced business services and tourism*"⁵⁵.

The average annual economic impact of domestic tourism (staying visitors) in the Sunderland City Council area for the 3 year period 2009-2011 was £31million which was the same as the average annual total visitor expenditure for the previous 3 year period (2006-2008). This static economic trend was in line with the regional (Tyne & Wear) level performance over the same three year periods. An annual average of 224,000 domestic tourist trips (overnight visitors) to Sunderland was made during the 3 year period 2009-2011 – which represents a 35% growth on the previous 3 year period (2006-2008)⁵⁶.

Overseas visitor numbers to Sunderland are relatively small –16,000 in 2014 and have declined by around 44% since 2010⁵⁷. Sunderland accounted for around 5.5% all overseas visitors to Tyne & Wear in 2014(289,943). Although there is no survey data available identifying overseas visitor expenditure in Sunderland, the average annual overseas visitor regional expenditure for the 10 year period 2005 - 2014 was almost £147 million⁵⁸. According to the 2011 Day Visitor Survey, Sunderland attracted 5.23 million leisure day visitors (3+ hours visit) who generated around £106 million of expenditure. This equated to 13% of the total leisure day visits in the Tyne & Wear area (40 million) and 12% of the total regional day visitor expenditure (£889 million). The Survey also indicates that almost three-quarters (72%) of day visit activity in the North East of England is from residents of the area – a "same area" proportion only exceeded in England by day visitors to London (73%)⁵⁹.

⁵¹ Sunderland Economic Master Plan "Smart & Sustainable"

⁵² Nomis Labour Market Profile – Sunderland [last accessed June 2015]

⁵³ Sunderland City Council – Economic & Life Chances Profile (East Sunderland)

⁵⁴ Nomis – Ryhope Ward Labour Market Profile [last accessed June 2015]

⁵⁵ Sunderland Economic Master Plan "Smart & Sustainable"

⁵⁶ Visit England – Local Authority and County Analysis (2006-2011)

⁵⁷ Visit Britain – Visits to Towns Detailed Data (2010 - 2014)

⁵⁸ Visit Britain – Visits to Different Parts of the UK (Regional Spread by Market)

⁵⁹ Visit England/Visit Scotland/Visit Wales – The GB Day Visitor: Statistics 2011

In 2008, just over 5,000 full-time job equivalents (FTEs) were supported by Tourism in Sunderland – although this level of employment had declined by around 9% since 2003 which is on a par with the regional average⁶⁰.

In 2010, Sunderland had three visitor attractions in the Tyne & Wear “Top 10” – Sunderland Museum & Winter Gardens (339,091 visits); the Empire Theatre (260,668 visits) and the National Glass Centre (158,058 visits) – although all three had witnessed a decline in their respective annual visits from 2009⁶¹. From data provided by Visit England⁶², visitor attendance numbers continued to decline in 2011 e.g. Sunderland Museums & Winter Gardens (-3.3% 2010 to 2011) and Monkwearmouth Station Museum (-1% 2010 to 2011).

Ryhope Engines Museum is located at the former Ryhope Pumping Station but no visitor attendance data is published. Ryhope Dene (*to the south of the eastern boundary of the proposed Sunderland Growth Area*) is located at the north end of the Durham Heritage Coast (Sunderland to Hartlepool) whilst the Coast to Coast (C2C) long distance cycle route from Whitehaven and Sunderland passes along the western boundary of the proposed Sunderland Growth Area. In 2006 241,000 trips were made on the C2C cycle route. This generated £10.7 million and safeguarded 173 full-time-equivalent jobs.⁶³ In addition, a section of the National Cycle Route No.1 (NCN 1) traverses the proposed Sunderland Growth Area at Ryhope whilst a section of NCN 70 borders the western boundary of the proposed development area.

The Tyne & Wear Tourism Management Plan 2008-2011 “Cities, Coast & Culture”⁶⁴ (ATMaP) suggests that Tyne and Wear’s visitor economy is distinctly different from the rest of the North East “with its unique offer of coastal, urban and cultural product”.

The ATMaP records that Sunderland has continued to expand and develop its tourism infrastructure with the ongoing development of significant cultural assets including the Sunderland Museum and Winter Gardens, Monkwearmouth Station Museum and The Sunderland Aquatic Centre, which has formed the basis of a sporting park with Sunderland AFC’s Stadium of Light whilst the historic area of Sunnyside in the city centre continues to expand the city’s tourism offer with cafes, bar shops and restaurants.

The ATMaP states that over the next 10 years Sunderland will seek “to develop a distinctive tourism offer based on events, attractions and heritage, expand its sporting facilities and develop Herrington County Park as the region’s premier outdoor events venue. Its regeneration will see a doubling of hotel stock and the refurbishment of its station. Its visitor profile will move from day visitors and VFR to grow a new layer of staying visitors attracted by its heritage, sporting facilities and business offer”.

TRANSPORTATION

There is a range of baseline information relating to transportation in Sunderland that includes roads, public transport and walking and cycling service provision.

Roads

Located south of the City of Sunderland, the Sunderland Growth Area is reasonably well served by the road network which currently supports neighbouring settlements such as Ryhope, Doxford Park, Tunstall Village. Prominent roads either on site or in the surrounding area include the A19 to the south of the site, the A1018 to the east, the B1286 at the north, the

⁶⁰ Tourism Tyne & Wear - Sunderland Key Facts & Statistics *and* Tourism Tyne & Wear – Tyne & Wear Key Facts & Statistics

⁶¹ Tourism North East – North East Visits to Attractions 2010

⁶² Visit England – Annual Visits of Visits to Visitor Attractions (2011 Full Attractions Listing)

⁶³ The Economic Impact of Cycling Tourism to the North East of England (2007) One North East & Sustrans

⁶⁴ The Tyne & Wear Tourism Management Plan 2008-2011 – Cities, Coast & Culture.

B1267 at the east and Burdon Lane which runs along a large stretch of the site's southern boundary.

According to Sunderland City Council's Local Development Framework Topic Paper 1.6 'Connectivity' (2009) Sunderland's car ownership levels are below the regional and national average, with 39.9% of the city's households not having access to a car. However it is noted that car ownership levels are increasing and that road traffic in the city increased by 11% between 2000-2006 with the expectation that this trend will continue at a rate of 2% per year. According to ONS statistics quoted in LDF Topic Paper 1.6, 61.6% of journeys to work in Sunderland in 2001 were taken by car. However the 2011 Census showed that this had fallen to 40.6%⁶⁵.

Public Transport

At present there are bus services located particularly in the areas of Doxford Park, Ryhope and adjacent urban areas however as the majority of the site is not currently developed meaning there is little public transport provision at the present time.

Sunderland City Council's LDF Topic Paper 1.6: Accessibility and Transport provides information on public transport access to the Nearest Main Centre from the Built Environment. This identifies that the majority of Sunderland Growth Area site to be within 21-30 minutes away from Sunderland city centre or an alternative town centre.

There are no rail stations located within the site boundary.

⁶⁵ Sunderland City Council - 2011 Census Fact Card: Sunderland
(<http://www.sunderland.gov.uk/CHttpHandler.ashx?id=14106&p=0&fsize=48kb&ftype=Sunderland - England Comparator.PDF>)

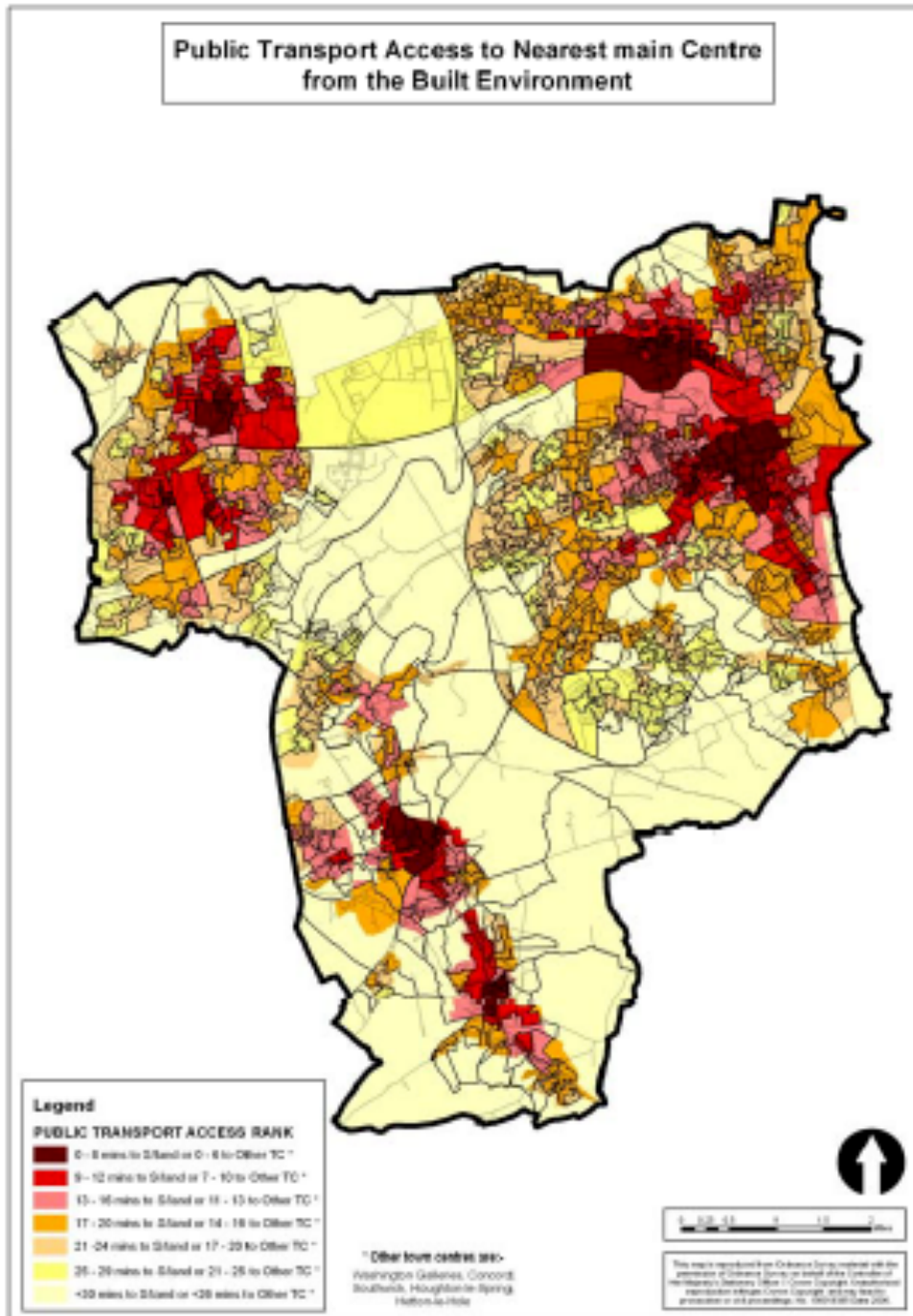


Figure 2.3 (Source: LDF Topic Paper 1.6 Connectivity 2009)

Walking and Cycling

There are a number formal and informal footpaths located both in and nearby the Sunderland Growth Area, for example at Nettles Lane and the area surrounding Blakeney Woods, as well as a number of footpaths near existing urban settlements to the north of the Sunderland Growth Area, for example at roadsides and in residential areas.

Cycling provision in the area is met along existing roads and footpaths which are mentioned above as well as the presence of National Cycle Network routes 1 and 20 in the area.

National Cycle Route 1 is located to the east of the site and leads in to Ryhope while Route 20 is located to the west and runs adjacent to the Sunderland Growth Area boundary before leading up to the nearby settlements of Moorside and Silksworth. In addition the North Sea cycle route stretching 6,500km through seven countries, which draws cyclists from around the world to Sunderland and England's east coast in general is also passes through the East of the Growth Area site.

A walk-ability index for Sunderland has been used by the Council and illustrates that the majority of the Sunderland Growth Area is within a walking distance of 0 to 3.5 of 10 key facilities identified. This number is quite low at the present time, reflecting the fact that much of the site is currently undeveloped. In the areas immediately surrounding Doxford Park and Ryhope the number of key facilities within walking distance rises above 5.

2.5 What's the Baseline Projection?

Just as it is important for the scope of SA to be informed by an understanding of current baseline conditions, it is also important to ensure that thought is given to how baseline conditions might 'evolve' in the future under the no plan / business as usual scenario. Doing so helps to enable identification of those key sustainability issues that should be a particular focus of the appraisal, and also helps to provide 'benchmarks' for the appraisal of significant effects. The following is a summary:

BIODIVERSITY, FLORA & FAUNA

The baseline has illustrated that the biodiversity designations within the area are predominantly in favourable condition. It is reasonable to consider that this picture may continue with a continued resource for ongoing management of sites in the short to medium term. Impacts associated with climate change may cause a change in condition to designations noted above in the long term.

The most important designations are the Northumberland Coast and Durham Coast SAP/SAC/SSSI/Ramsar sites which are located c. 1km from the study area to the east. The designated area already caters for a range of human activities and is not considered to be significantly impacted upon at present. Provided that likely significant affects are adequately assessed and mitigated through the Development Framework for South Sunderland, it is not expected that delivery of the Growth Area will significantly increase the level of impact upon the designated sites from human activity.

Taking into account estimated decline in the Growth Area 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.

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. Taking into account future predictions for sea level rises and storm frequency/extreme weather events, it is not illogical to presume that habitat quality will worsen as a result.

LAND RESOURCES

If development is not forthcoming in the area, existing areas of arable farmland will be unaffected. Similarly, grassland species along with rare plants which may be present as a result of soil conditions will not be affected. The delivery of urban growth in the area may have an impact on existing ecological species and the Local Wildlife Site at Blakeney Woods which is located within the site boundary.

Waste production is likely to continue to rise as has been the trend in preceding years and in line with predictions to 2020. Assuming that the upward trend in recycling continues and with waste management being given higher priority through relevant action plans it is reasonable to assume that the targets for reducing waste sent to landfill will be achieved.

WATER QUALITY & RESOURCES

Water quality and quantity would be likely to be adversely affected by new development particularly in the absence of a plan that sets out the appropriate distribution and phasing of development to take into account infrastructure and environmental constraints.

Flood risk is likely to increase in the future even if no further development took place in the South East region, due to the effects of climate change. Generally, rising sea levels will increase coastal flooding; and increased rain in the winter and stronger storm events will increase fluvial flooding. The Pitt Review concluded that flood risk will increase in the future: “The scale of the problem is... likely to get worse... events of this kind are expected to become more frequent... climate change has the potential to cause even more extreme scenarios than were previously considered possible. The country must adapt to increasing flood risk”.

The location of the South Sunderland Growth area means there are strong links to water resources and climatic factors such as flooding. As heavy rainfall and extreme weather events become more prevalent the chances of contamination and flash flooding events will also become greater. This potentially causes increases in sediment load in coastal waters and consequently turbidity which can have serious deleterious effects on aquatic and marine life.

Climatic forecasting indicates that the prevalence of heavy precipitation and extreme weather events are likely to worsen meaning that incidences of flooding and contamination would also be greater. This may have detrimental impacts for the quality of bathing waters along the coastline. This aside, the quality of water should improve/be mitigated as a result of continued monitoring by the Environmental Agency, as has been the trend in recent years.

The baseline data indicates that presently there is limited capacity in the local waste water infrastructure in Sunderland. Additional pressure on the sewage system by new development could lead to an increase in the instances of contamination of coastline waters which are already considered to be ‘at risk’ of not meeting objectives of the Water Framework Directive. It is reasonable to assume that there will be additional development in Sunderland without the Masterplan, even without development or change within the Masterplan area itself.

AIR QUALITY AND NOISE

The Tyne and Wear Local Transport Plan states that car ownership in the region is growing faster than any other area in the country and as such traffic levels are expected to continue to rise⁴⁶. This indicates that localised pollution in South Sunderland Growth Area may be expected to increase at background levels. As recognised by the Tyne and Wear Air Quality Strategy (2009), the resulting poor air quality from transport does not only result in health problems and unpleasant living conditions for those residents affected by it, it is also a threat to the region’s development and regeneration.

Against the background of increasing traffic is increasing vehicle efficiency and reduced emissions. Research suggests that background air quality throughout the UK will improve significantly over the next 10-15 years, primarily as a result of tightening Euro emission standards for cars and lorries and cleaner energy generation⁶⁶. This may help to suppress the volume of emissions that might be produced by vehicles at current standards.

⁶⁶ Grice, S. et al (2006) *Baseline projections of air quality in the UK for the 2006 review of the Air Quality Strategy*, report to Defra et al [online] available at: http://www.airquality.co.uk/archive/reports/cat16/0604041040_baselineprojectionsreport5.pdf (accessed 23 June 2009) and Grice, S. et al. (2007) *Updated projections of air quality in the UK for base case and additional measures for the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007*, report to Defra et al [online] available at: http://www.airquality.co.uk/archive/reports/cat17/0707171116_newbaselineandadditionalmeasuresreport_v6.pdf (accessed 23 June 2009).

CLIMATIC FACTORS, FLOODING & ENERGY RESOURCES

A review of the North East Climate Change Adaption Study (2008), North East Region indicated the following predictions for the Tyne and Wear Area.

The annual average rainfall falling at the coast within Tyne and Wear is less than that falling further inland at central Newcastle and Gateshead- the coast will have more seasonal rainfall, with greater decreases in summer (around 37%) and increases in winter (around 21%) than expected inland.

Snowfall will decrease throughout all seasons, with winter seeing around a 75% and 45% reduction at the inland and coastal locations of the sub-region respectively.

The annual average temperature - a consistent rise of around 1.8°C will occur across Tyne and Wear.

Consistent increases throughout all seasons, with winter expecting the smallest increase (around 1.3 to 1.4°C), followed by spring (around 1.6°C), autumn (around 2.1°C) and then summer (around 2.1 to 2.2°C).

Severe Temperatures: During the severe cold periods, all seasons can expect an increase in temperature. The increase across all seasons has the effect of raising the 5th percentile spring temperatures above freezing, with an accompanying reduction in frost and snowfall events.

HERITAGE & LANDSCAPE

The Sunderland Growth Area will bring a significant change to the local landscape with the introduction of development of varying types and densities. Whilst some landscape features such as wooded areas like Blakeney Wood are likely to be retained, the rural nature of the site will not be retained. The Sunderland Growth Area should ensure that landscape features such as green corridors are designed in to the masterplan to maintain a good level of landscape connectivity in line with Sunderland's Green Infrastructure Strategy Framework.

Due to the limited presence of historic features in the site boundary there is likely to be little change in the future baseline conditions with regard to historic assets. There is an opportunity to design development sensitively in the surrounds of Ryhope Pumping Station and its various listed buildings along with the potential to enhance the its integration with new development. The close proximity of Ryhope Pumping Station, which is a Scheduled Monument, should also be considered carefully as the Growth Area develops.

COMMUNITY HEALTH, EQUALITY & EDUCATION

The baseline has established that, whilst the population of Sunderland has been in decline since the 1980's, it is predicted to grow by around 2% between 2010 and 2013 – a growth rate which is lower than the projections both the North East and England. With the Sunderland Growth Area having the potential to accommodate between 2,800 and 3,300 new dwellings over the next 20 years, it is reasonable to assume that both the Ryhope and Doxford wards will contribute to increasing the population (compared to the baseline conditions) in this area of the city.

Quality of life indicators and educational attainment are likely to continue as there is no indication that these should decline. The city's commitment to health related objectives and status as a Healthy City may also see an improvement in health related indicators such as life expectancy and those receiving incapacity benefit rise as has been the 10 year trend.

LOCAL ECONOMY & EMPLOYMENT, INCLUDING TOURISM

The manufacturing sector was traditionally the dominant industry in Sunderland and the city still retains a higher proportion of its workforce in this sector than both the regional and national averages which could lead to further unemployment unless mitigated by investment in/establishment of more modern industries. The vision and objectives of the Sunderland Economic Masterplan seek to address the need for change by moving Sunderland forward as an entrepreneurial, and diverse, 21st century economy.

The International Monetary fund (IMF) has projected that the UK economy will grow by 0.9% in 2014⁶⁷. Therefore, difficult economic conditions will remain in the UK for the immediate future – and from which Sunderland will not be immune.

It has been shown through the baseline that the Ryhope and Doxford wards which will host the proposed Sunderland Growth Area are less affected by rising unemployment and deprivation than other areas of Sunderland. However, investment in the local economy and business will be required to ensure that the new Sunderland Growth Area can become a sustainable community in economic, social and environmental terms.

TRANSPORTATION

Based on recent evidence, it is likely that travel by car will prevail as the dominant mode of travel in Sunderland. There is a trend of rising car ownership levels in Sunderland as outlined in Sunderland City Council's Local Development Framework Topic Paper 1.6 'Connectivity' (2009) and is expected to rise at a rate of 2% per year, a faster rate than the national average, whilst road traffic levels increased by 11% between 2000 and 2006.

With regard to public transport, the amount of fee paying passengers in the Tyne and Wear area has been declining by c.2% per year since 1999/2000 which presents a challenge in the long term.

2.6 What are the key issues that should be a focus of the appraisal?

The identification of sustainability problems in the scoping report facing the site area provides an opportunity to define key issues for the forthcoming growth area development framework and to identify how these issues might be addressed. It also provides useful information to inform the SA process and is a requirement of the Government guidance.

In addition, to the key overarching issues, drawing on the review of the sustainability context and baseline, the SA Scoping Report was able to identify a range of sustainability issues that should be a focus of SA, ensuring it remains focused.

Key Issues identified:

Key issues and points from crosscutting themes from the topic profiles affecting the site area and in some cases the wider Sunderland area are:

- The locality contains a number listed structures, and their settings should be respected;
- Loss of agricultural land and greenfield – maintain and enhance areas of open and greenspace;

⁶⁷ Sky News (7 March 2014)

- Mature trees;
- There is an increased flood and contamination risk on the site because of historical flooding and contamination issues and the risk of ground and water contamination associated with heavy rainfall;
- Roads and accessibility due to Increasing numbers of car owners;
- Infrastructure issues;
- The effects of noise, air emissions and climate change due to increase of population numbers and increased traffic;
- Impact on coastal areas due to increasing population numbers; and
- Mergence of built up areas.

The overarching issues and guiding criteria assist as a prompt within each Objective led chapter assessment of the plan, as below:

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Safeguard and enhance the region's environmental infrastructure	<ul style="list-style-type: none"> • Protect and enhance sites and habitats designated for their biodiversity value • Enhance biodiversity in green spaces and amongst developments in urban areas • Bring biodiversity into the day-to-day lives of Sunderland's residents by promoting the qualities of designated sites 	<ul style="list-style-type: none"> • Will it help achieve Biodiversity Action Plan targets? • Will it protect and enhance open spaces of amenity and recreational value? • Will it use land that has been previously developed in preference to Greenfield? • Will it protect and enhance sites and habitats designated for their biodiversity value • Will it enhance biodiversity in green spaces and amongst developments in urban areas • Will it bring biodiversity into the day-to-day lives of Sunderland's residents by promoting the qualities of designated sites 	Biodiversity, Flora and Fauna
Live within our environmental limits: Secure safe waste recovery / disposal without endangering health or harming the environment	<ul style="list-style-type: none"> • Protect and enhance sites and habitats designated for their geodiversity value • Protect the human health and environment by producing less waste and by using it as a resource 	<ul style="list-style-type: none"> • Will it protect and enhance sites and habitats designated for their geodiversity value • Will it protect the human health and environment by producing less waste and by using it as a resource • Will it use land that has been previously developed in preference to Greenfield? • Will it reduce household and other forms of waste? • Will it increase waste recovery and recycling? • Will it encourage waste treatment locally? • Will it increase opportunities for domestic recycling? 	Land Resources

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
<p>Live within our environmental limits: Protect water sources from contamination and minimise the release of harmful products into the environment.</p>	<ul style="list-style-type: none"> • Improve the water quality of river, ground and coastal waters that are considered to be 'at risk' of not meeting WFD objectives, requirements and consider recommendations from the Northumbria River Basin Management Plan • Ensure that the current water and sewage capacity can accommodate the impact of new development and regeneration strategies • Ensure surface water run-off is managed in a sustainable manner, to reduce flood risk whilst improving water quality 	<ul style="list-style-type: none"> • Will it improve the water quality of river, ground and coastal waters that are considered to be 'at risk' of not meeting Directive objectives • Will it ensure that the current water and sewage capacity can accommodate the impact of new development and regeneration strategies • Will it ensure surface water run-off is managed in a sustainable manner • Will it limit development in the flood plain? • Will it reduce the number of properties affected by flooding incidents? • Will it assist in preparing Sunderland for impacts of climate change? • Will it reduce water consumption and generation of wastewater? • Will it encourage the re-use of water? • Will it ensure protection and enhancement of limestone grassland? • Will it ensure protection and enhancement of the coast as a place of tranquillity and inspiration that supports wildlife? 	<p>Water Quality and Resources</p>
<p>Live within our environmental limits: Minimise polluting activities and contain air pollution to within acceptable limits.</p>	<ul style="list-style-type: none"> • Ensure development supports efforts to reduce all forms of pollution, and in particular the effects of motor vehicles 	<ul style="list-style-type: none"> • Will it ensure development supports efforts to reduce all forms of pollution, and in particular the effects of motor vehicles • Will it encourage healthy lifestyles, including travel choices? • Will it enhance community and public transport? • Will it reduce the need to travel for long distances? • Will it reduce the need to travel for commuting? • Will it reduce traffic volumes? • Will it encourage travel by means other than the car? • Will it ensure that where there is new development it retains tranquil areas? 	<p>Air Quality & noise</p>

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Adapt to and mitigate against climate change	<ul style="list-style-type: none"> • Make an equitable contribution to helping the UK cut its carbon dioxide emissions by 60% by 2050 • Reduce the cause and impacts of flooding • Address the risk and impacts of coastal erosion • Support the delivery of sustainable buildings • Ensure that a significant proportion of the energy supply of substantial new development is gained on-site and from a renewable source and/or from a decentralised, renewable or low-carbon, source 	<ul style="list-style-type: none"> • Will it make an equitable contribution to helping the UK cut its carbon dioxide emissions by 60% by 2050 • Will it reduce the cause and impacts of flooding • Will it address the risk and impacts of coastal erosion • Will it use land that has been previously developed in preference to Greenfield? • Will it reduce emissions of greenhouse gases? • Will it reduce traffic volumes? • Will it encourage travel by means other than the car? • Will it assist in preparing the Sunderland for impacts of climate change? • Will it assist in new homes meeting the BREEAM standards? • Will it increase the proportion of energy needs being met from renewable sources? • Will it reduce the demand for energy? • Will it ensure that where there is new development it is appropriate in a changing climate? 	Climatic Factors, Energy and Flooding
Promote, enhance and respect the region's culture and heritage	<ul style="list-style-type: none"> • Protect and enhance historic built environment by ensuring viable uses • Prevent new development which is at odds with the character of the site • Preserve the historic environmental infrastructure 	<ul style="list-style-type: none"> • Will it protect and enhance historic built environment by ensuring viable uses • Will it prevent new development which is at odds with the character of the site • Will it preserve the historic environmental infrastructure • Will it create vibrant, multifunctional countryside in and around towns? • Will it protect and enhance the historic environment within built-up areas? • Will it protect and enhance open spaces of amenity and recreational value? • Will it protect and enhance the area's industrial past? 	Heritage and Landscape

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Improve health and well-being while reducing inequalities in health	<ul style="list-style-type: none"> • Encourage recreation that will contribute to the health of residents and visitors • Improve pedestrian and cycle routes to promote healthy modes of transport 	<ul style="list-style-type: none"> • Will it encourage recreation that will contribute to the health of residents and visitors • Will it improve pedestrian and cycle routes to promote healthy modes of transport • Will it reduce rates of sickness and death? • Will it improve accessibility to local GP? • Will it reduce noise pollution? • Will it ensure that where there is new development it preserves the area's strong sense of place, retains tranquil areas and improves quality of life for local residents? 	Community Health, Equality and Education
Build sustainable communities	<ul style="list-style-type: none"> • Promote and encourage community involvement and participation • Stem the declining population by reducing out-migration • Reduce instances of petty crime and vandalism 	<ul style="list-style-type: none"> • Will it promote and encourage community involvement and participation • Will it stem the declining population by reducing out-migration • Will it reduce instances of petty crime and vandalism • Will it improve the mix of dwelling sizes and tenures? • Will it improve the supply of affordable housing? • Will it address changes in future housing need? • Will it reduce poverty and social exclusion in those areas most affected? • Will it reduce the number of households in fuel poverty? • Will it increase opportunities for consultation? • Will it improve access for the disabled? • Will it improve accessibility to health, education, shopping and leisure? • Will it enhance community and public transport? 	Community Health, Equality and Education & Economy and Employment
Establish a strong learning and skills base	<ul style="list-style-type: none"> • Maintain levels of educational attainment 	<ul style="list-style-type: none"> • Will it maintain levels of educational attainment • Will it increase the numbers of school-leavers achieving GCSE passes? • Will it increase numbers undertaking further and higher education? • Will it enhance opportunities for adult education? • Will it encourage training opportunities for higher quality employment? 	Economy and Employment

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Strengthen the regional economy	<ul style="list-style-type: none"> • Strengthen the local economy by encouraging local businesses to locate to the area • Build the local tourist economy by attracting more visitors to the seafront 	<ul style="list-style-type: none"> • Will it ensure that where there is new development it preserves the area's strong sense of place • Average weekly income of residents • Number of visitors to the area • Number of new businesses established 	Economy and Employment
Develop a more sustainable employment market	<ul style="list-style-type: none"> • Establish a more diverse local economy 	<ul style="list-style-type: none"> • Will it ensure that where there is new development it preserves the area's strong sense of place 	Economy and Employment
Develop sustainable transport and communication	<ul style="list-style-type: none"> • Reduce the reliance on the private car as a preferred mode of transport • Reduce congestion • Improved infrastructure • Improve public transport links between South Sunderland and key services in the city • Improve pedestrian and cycle routes to promote healthy modes of transport 	<ul style="list-style-type: none"> • Number of cycle trips • Patronage of public transport • Levels of car ownership and road users • Accessibility rankings 	Transportation

3 WHAT HAS PLAN-MAKING / SA INVOLVED UP TO THIS POINT?

This Part of the SA Report describes how, prior to preparing the draft South Sunderland Growth Area Development Framework consultation document, there has been an appraisal of alternative approaches to addressing a range of plan issues through the Core Strategy; and precisely how the Council took account of these ‘interim’ SA findings.

3.1 Alternatives for what?

The Regulations⁶⁸ are not prescriptive, stating only that the SA Report should present an appraisal of the ‘plan and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme’.

The SEA Act requires that the Environmental Report should consider:

‘Reasonable alternatives to the plan or programme, taking into account the objectives and the geographical scope of the plan or programme’ and give ‘an outline of the reasons for selecting the alternatives dealt with’ (Part 2(14) and Schedule 3 (8)).

This Chapter describes how, as an interim plan-making / SA step, reasonable alternatives were considered for the following Sunderland Growth Area Development Framework.

3.2 Background?

Consideration of alternative (and rejected) options for the Core Strategy effectively began in 2005 with consultation on the publication of the Core Strategy Issues and Options for the city.

This was followed by more specific topic-based exercises such as ‘green space’ and ‘employment’, which led to consultation on the first Preferred Options document in 2007/08 and most recently to consultation on Alternative Approaches in September 2009. The current ‘Revised’ Preferred Options has been prepared taking into account these various stages of the plan process.

The SA for the Core Strategy considered reasonable alternatives⁶⁹ for Quantum of housing, Spatial approach to housing and employment growth, Key Regeneration Sites, and Development Management Policies.

In addition to establishing a broad spatial approach to housing and employment growth there is also a need for the Core Strategy Local Plan to consider the allocation of key sites/locations to deliver the identified housing and employment growth.

Ten “strategic sites” were identified as options for delivery of major regeneration/development in the Alternative Options 2009 consultation paper. These sites were identified on the basis that they were considered critical to the delivery of the Core Strategy and were identified as sites which would require support to bring the site forward for development.

The following sites were identified:

1. North of Nissan: This site to the north of Nissan and adjacent to the A19 would be able to accommodate a range of large-scale employment uses

⁶⁸ Environmental Assessment of Plans and Programmes Regulations 2004

⁶⁹ In relation to ‘the site allocations’ a range of options were considered, but it is not the case that the options were alternatives (given that there was no mutually exclusive choice to be made between them). There was, however (prior to developing the draft plan), a ‘narrowing-down’ of options, informed by the findings of SA.

2. Groves: The largest housing site in the city (35ha), the redevelopment of the former Groves Cranes land would create a new residential community on the riverside, with a new local centre with community and business uses
3. Farringdon Row: This site would complement development at the Vaux site, bringing new office jobs and housing to the city centre
4. Stadium Village: The development of new large-scale leisure uses around the Stadium of Light along with housing and employment will complete the rejuvenation of this area of the riverside
5. Vaux: The main aim is to develop offices to bring new jobs to the city centre, along with new homes
6. Holmeside Triangle: New large-scale shopping facilities are proposed, to include a food supermarket, enhancing the city centre's retail function and its vitality and viability
7. The Port: The future development of port-related uses and the development of adjoining land will add to the range of employment opportunities in Central Sunderland and complement wider regeneration activities
8. South Ryhope: This large greenfield site in the south of the city, accessed from the new Southern Radial Route, would be developed as a business park for a range of employment uses
9. Sunderland Strategic Transport Corridor (SSTC): This new road will provide a link from the A19, accessing the development sites on the riverside and the city centre, to the Port. It will cross the river on an iconic new road bridge west of the Queen Alexandra Bridge
10. Central Route: This road will greatly improve access to the employment areas at Sedgelych and Dubmire ensuring that these areas can play a continuing role in the local economy

These sites were identified as important sites in terms of their potential to deliver regeneration and development objectives.

The Council's preferred approach was to allocate just two strategic sites (Former Vaux brewery/Farringdon Row for offices and housing and Land to the North of Nissan for employment purposes) in the Core Strategy.

Thirteen other locations (which essentially formed 'reasonable alternatives' to the strategic sites identified) were identified as 'Locations for Major Development (LMD)', including the sites that make up the SSGA area.

These sites are considered not central to the delivery and success of the Core Strategy, but of sufficient importance in terms of their ability to help to regenerate large sites across the city. Planned in a comprehensive fashion, it is expected that development of these sites will have a significant impact upon the pattern of land use within the city. The Core Strategy states that these locations are not specifically allocated as sites in the Core Strategy, but were to be further defined in a Site Allocations Development Plan Document.

With regards to the SSGA, the Core Strategy took forward three unimplemented allocations from the UDP, grouped them together along with other areas of land, identifies them as Locations for Major Development (LMDs) and proposes a new growth area, known as South Sunderland Growth Area (SSGA), which is the subject of the Sunderland South SPD and this SA. The areas identified are:

- Chapelgarth,
- Land North of Burdon Lane,
- Cherry Knowle, and
- South Ryhope.

The SSGA has the potential to meet 20% of the city's housing need and, in particular, provide significant numbers of much needed executive and larger family homes.

Delivery of the Sunderland Growth Area will contribute to achieving the strategic aims of the Council's Sunderland Strategy (2008 – 2025) and Economic Masterplan (2010) to encourage the retention of students and attract new households by improving housing choice and providing a greater proportion of higher value housing.

Strategic local policy such as the Sunderland Strategy (2008 – 2025) and Economic Masterplan (2010) emphasises the need to encourage the retention and attraction of new households by improving housing for residents and providing an increased proportion of higher value housing.

To ensure land availability is not a constraint on the provision of housing stock the council undertakes regular Strategic Housing Land Availability Assessments (SHLAA) to assess sites for their housing potential and development timescale. The SHLAA (2013) identifies sites within Sunderland South which have a key role in meeting housing demand in the city with potential to deliver some 7304 houses in a 1 to 15 year period. This has informed the emerging Core Strategy Policy CS1.2 which seeks to provide a minimum of 7,663 dwellings over a 20 year period in South Sunderland 2012-2032. Collectively the sites within the SSGA could deliver between 2800 and 3300 dwellings over the next 20 years. (20% of the city's housing need). Evidence has identified a need for executive and larger family homes, and as such the area will play a strategic role in meeting the city's housing need in both quantity and choice.

3.3 What are the reasonable alternatives?

Given that the site uses and preferred way forward has been established at strategic level and through the core strategy, the 'reasonable alternatives' at plan level for the SSGA masterplan focused on refining the site as a new housing area for South Sunderland with adequate infrastructure and facilities to meet the needs as a new community, whilst tying in with existing development in the area. Given the interest in landowners and developers in submitting planning applications, it was important to establish an acceptable guide for development through the production of a Supplementary Planning Document (SPD).

The '*reasonable alternatives*' (the site options) for the SSGA as below have been reviewed in light of the evidence base and consultation with developers and internal consultation to result in a preferred Masterplan that meets Sunderland's housing needs. All three schemes were based on similar housing unit numbers, and associated uses and involved reviewing best layouts, housing mix, accessibility and use of greenspace and links to the wider community. The Options included:

Option 1 - Executive-led scheme

Option 2 - Market-led scheme

Option 3 - Market-led scheme (Utilising access from Burdon Lane)

See Layout drawings as overleaf:

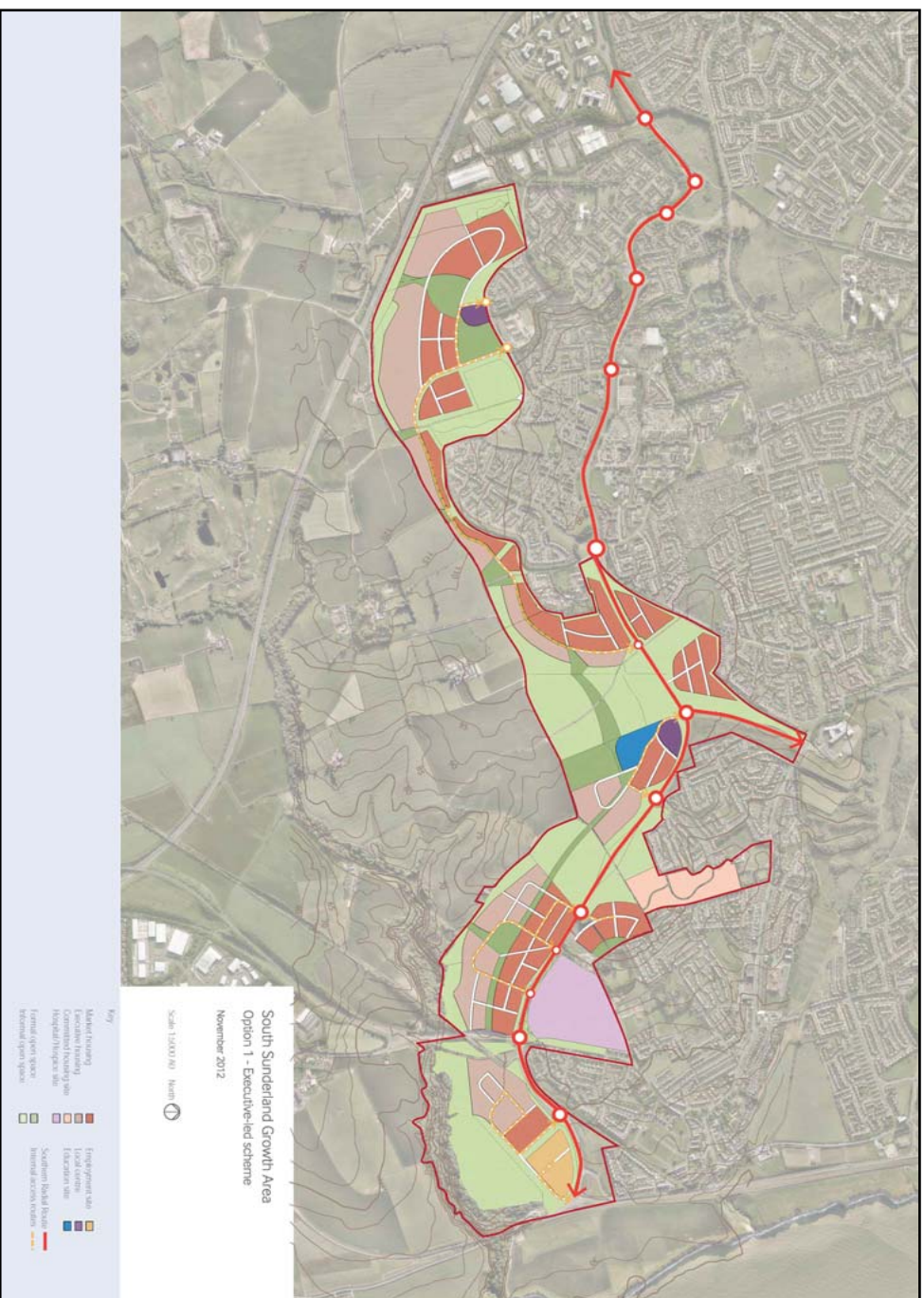


Figure 3.1: Option 1 - Executive-led scheme

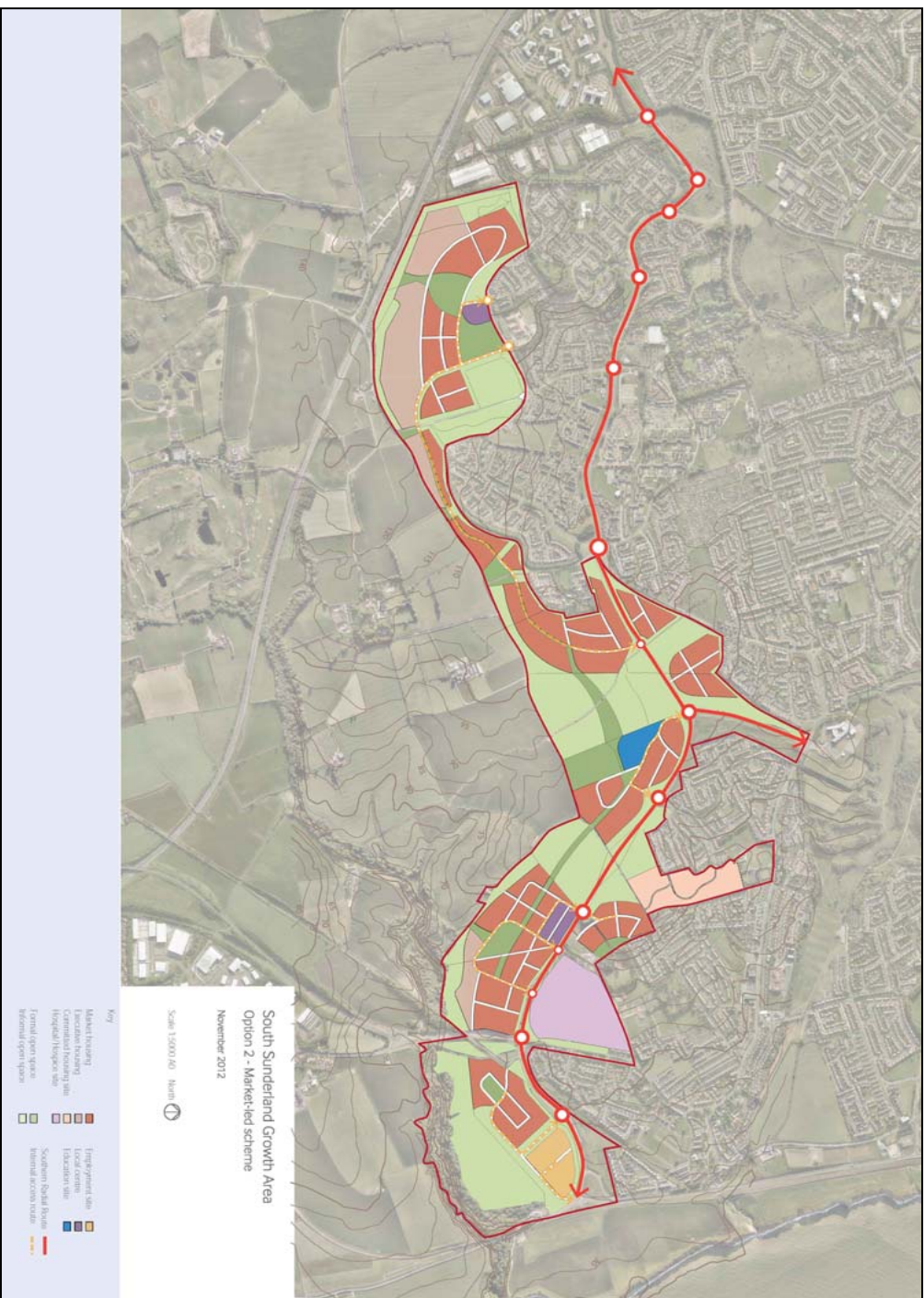


Figure 3.2: Option 2 - Market-led scheme

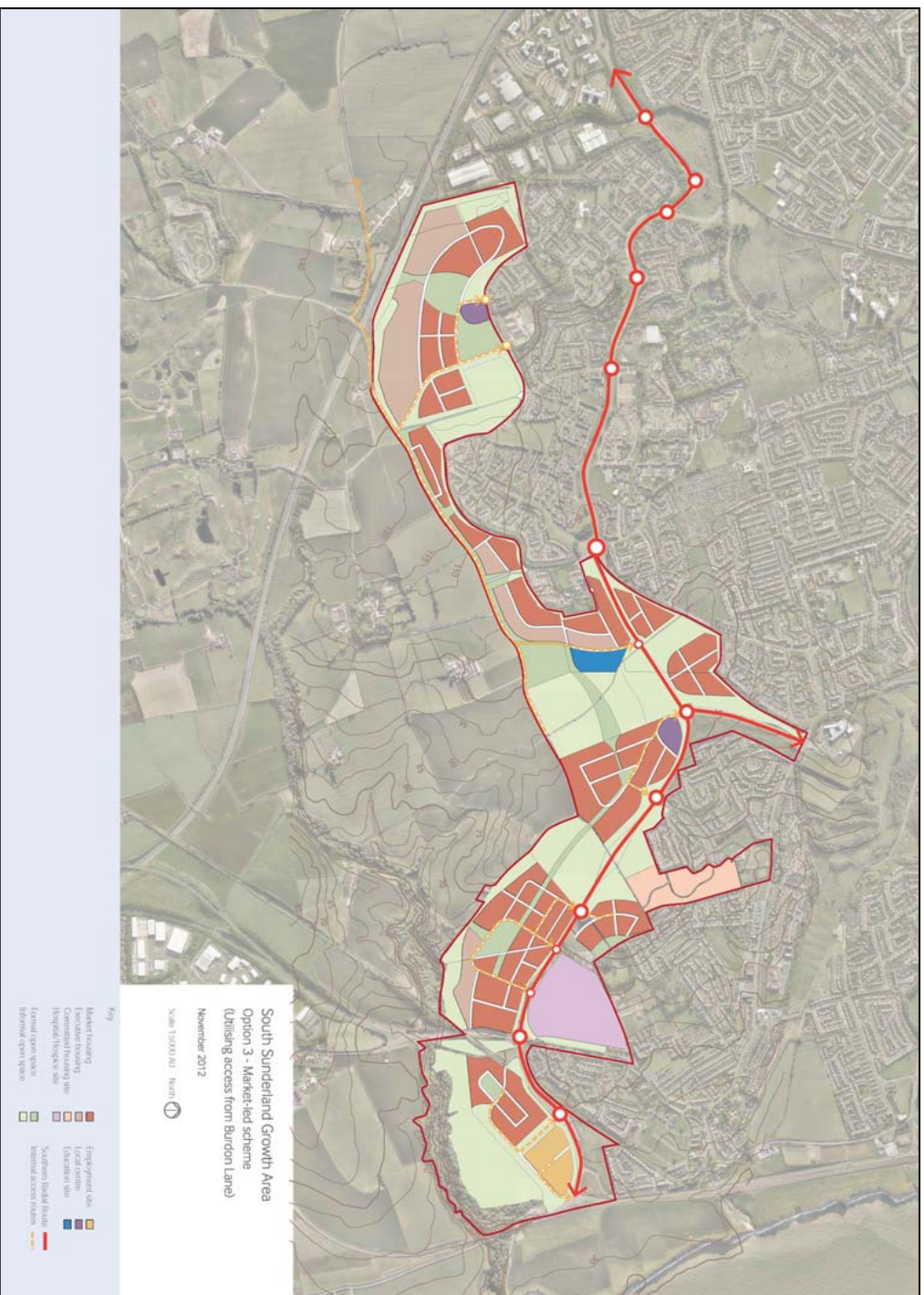


Figure 3.3: Option 3 - Market-led scheme (Utilising access from Burdon Lane)

3.4 Why has the preferred approach been selected?

The proposed Masterplan is a combination of the options in that, through the SHMA there was identified a need for both market led and executive housing to provide a housing mix and choice that meets Sunderland's current housing shortage and to assist in retaining the population. The SPD identifies that each market led housing development area will incorporate an element of executive led housing rather than totally segregated, whilst allowing for flexibility in planning proposals. The access from Burdon Lane as in Option 3 will not be a vehicle access, but will become a multi-user route for pedestrians, cyclists and horse-riders. The layouts, green space and open space areas and links were improved and increased to offer a high quality space taking consideration of the topography for impressive views, better walkability and accessibility for all modes of transport and consideration of the environmental and archaeological designations.

Given the amount of research and evidence carried out to support the development of the SSGA through the Core Strategy, and the SA of the Core Strategy alternatives, the SSGA alternatives are not vastly different in principle but show a design evolution that has been effectively worked through from strategic level at the Core Strategy to masterplan level, based on need and understanding of the sites potential.

The current Masterplan is preferred as it:

- Assists in meeting Sunderland City Council's housing needs and future needs to maintain the population;
- Is based on a thorough evidence base on the existing area and future needs;
- Will provide a high quality living area that has taken due consideration of its environment in respect of topography, greenspace and wider area and potential recreational uses;
- Will maintain and protect areas of biodiversity and recreation where the value is currently low quality, and improve these areas for future use;
- Has also included discussions with landowners to ensure that there is an understanding of the current and potential land uses; and
- Links in well to the wider Sunderland City Council Area through transport links and accessibility;
- Provides a Design Guide that incorporates sustainability measures and a strategic approach to the individual areas of development that will result in a high quality place.

This is in line with the vision of the SPD for

'A new sustainable community will be created in South Sunderland which provides a choice of high quality homes in a landscaped setting, well connected to the surrounding area and new and existing local facilities. The natural and built environment will enhance the distinctive characteristics of this unique area which borders the Sunderland Green Belt and provide views across the city and coast.'

4 WHAT ARE THE APPRAISAL FINDINGS AND RECOMMENDATIONS AT THIS CURRENT STAGE?

4.1 Introduction

Chapter’s 5 to 16 of this Sustainability Appraisal present an appraisal of the draft South Sunderland Growth Development Framework approach, as set out within the draft South Sunderland Masterplan consultation document, also referred to as the Supplementary Planning Document (SPD) The assessment findings relating to the South Sunderland Master Plan are presented individually under each SEA objective. Each chapter assesses the effects of the 12 objectives (taking into account the range of supporting measures) individually, and also viewed ‘as a whole’.

4.2 Sustainability Appraisal Methodology

The appraisal identifies and evaluates ‘likely significant effects’ on the baseline / likely future baseline associated with the draft plan approach, drawing on the sustainability topics and issues identified through scoping (see Part 1) as a methodological framework.

Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the policy measures under consideration. The ability to predict effects accurately is also limited by understanding of the baseline and (in particular) the future baseline.

In light of this, where likely significant effects are predicted this is done with an accompanying explanation of the assumptions made⁷⁰. In many instances it is not possible to predict likely significant effects, but it is possible to comment on the merits of the draft plan approach in more general terms.

It is important to note that effects are predicted taking into account the criteria presented within Regulations⁷¹. So, for example, account is taken of the duration, frequency and reversibility of effects as far as possible. The potential for ‘cumulative’ effects is also considered⁷². These effect ‘characteristics’ are described within the appraisal as appropriate.

4.3 Appraisal findings

At the end of each SA Objective chapter we have provided a summary of likely impacts. Within this table we have used a traffic light system based on the following 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 SPD
Negative effect
Significant negative effect

⁷⁰ As stated by Government Guidance (The Plan Making Manual, see <http://www.pas.gov.uk/pas/core/page.do?pagelid=156210>): "Ultimately, the significance of an effect is a matter of judgment and should require no more than a clear and reasonable justification."

⁷¹ Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004

⁷² In particular, there is a need to take into account the effects of the Local Plan acting in combination with the equivalent plans prepared for neighbouring authorities. Furthermore, there is a need to consider the effects of the Local Plan in combination with the ‘saved’ policies from the [Old Local Plan].

5 SAFEGUARD AND ENHANCE THE REGION’S ENVIRONMENTAL INFRASTRUCTURE (SA OBJECTIVE 1)

5.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 5.1: SA Objective 1 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Safeguard and enhance the region’s environmental infrastructure	<ul style="list-style-type: none"> • Protect and enhance sites and habitats designated for their biodiversity value • Enhance biodiversity in green spaces and amongst developments in urban areas • Bring biodiversity into the day-to-day lives of Sunderland’s residents by promoting the qualities of designated sites 	<ul style="list-style-type: none"> • Will it help achieve Biodiversity Action Plan targets? • Will it protect and enhance open spaces of amenity and recreational value? • Will it use land that has been previously developed in preference to Greenfield? • Will it protect and enhance sites and habitats designated for their biodiversity value • Will it enhance biodiversity in green spaces and amongst developments in urban areas • Will it bring biodiversity into the day-to-day lives of Sunderland’s residents by promoting the qualities of designated sites 	Biodiversity, Flora and Fauna

5.1 What will the situation be with the Masterplan?

Parts of the site are greenfield, and are adjacent to an inter-district green infrastructure corridor. Therefore development would potentially adversely impact on the city’s green infrastructure and on the biodiversity potential of the site.

Masterplan proposals have identified the unique value of the SSGA landscape and its setting amongst a number of Local, National and European designations. It has recognised that the Masterplan should retain and enhance the existing hedgerows, shelterbelts and woodlands whilst introducing additional quality public open space, allotments, orchards, formal green space and wetland areas. The section regarding Habitats within Section 5.5 (pg. 41) promotes the creation of ‘habitats of value’ which are to include areas of grassland, hedgerows, woodland, ponds or swales (SUDs). The creation of these connected areas throughout the four sub-areas will bring about a number of ecological benefits including biodiversity enhancements and wildlife corridors throughout the SSGA.

In addition, the SPD acknowledges the importance of green space to Sunderland and its residents and the quality of the greenspace in the SSGA was identified as low as much of the area is used as arable farm land, allowing opportunity for improvement. In addition, the masterplan proposes development on unused areas of brownfield land, whilst promoting a

high quality and cohesive green environment through the generic principals of the masterplan for all new built development.

The masterplan specifically references the use of Green Infrastructure (GI) throughout the report, especially with regards to satisfying the Habitat Directive. Improvements to GI are detailed specifically within the Proposed HRA Mitigation Measures which are to be taken forward as part of the masterplan, but also throughout the report with regards to it's influence on the landscape, wellbeing and health and to climate change. This improvement in overall green infrastructure is likely to have positive impact upon wildlife as a result of habitat creation and extending/creating ecological networks, but also cumulative positive impacts upon landscape and visual, climate change adaption, and health and wellbeing.

The SPD recognises the need to address the Habitats Directive through the provision of Suitable Alternative Natural Greenspaces (SANGs). It is intended that public open spaces will provide complementary recreational and ecological functions. 'Buffer Zones' are highlighted as an important element of the Masterplan, suggesting that they will be required to surround areas of important landscape and wildlife features, and the Masterplan states that existing Landscape features of note will require to be enhanced through development, (Blakeney Woods LWS, Cherry Knowle Dene LWS, and Ryhope Dene LWS).

The SPD also acknowledges the importance of any planting using native species which will enhance the natural characteristics of this area of the seafront. It is proposed that native species of planting should be focused and provided along areas such as Blakeney Wood LWS and also provide additional trees to the species-poor woodland along Burdon Lane. Where landscape edges are identified as thin or non-existent these are to be strengthened through planting. A Phase 1 Habitat Study was undertaken in 2013/2014 to inform the masterplan proposals.

The SPD recognises the importance of boundary treatments for the physical built environment as it interfaces with the natural environment, with identified boundary treatments in particular when adjacent to areas such as SANGS, hedgerows and the public realm. In addition, the SPD recognises the impact of the proposals on these designations by the requirement for an ecological survey assessment and mitigation report to be submitted alongside any planning application, prepared by a suitably qualified professional and in accordance with good practice guidelines.

The SPD has site specific design guidance picking up on the biodiversity features of each location which provides a strong structure for planning applications and developments coming forward with consideration for how each site links in to the wider area.

It is recognised that proposals will cause an increase in development in close proximity to the local environmental designations. In turn this may cause an increase not only in the permanent population of the immediate area but also increased visitors both within and surrounding the SSGA, in particular to the adjacent coast (Ryhope Beach – Hendon Beach), which is 400m from the SSGA at the closest point. This can, if improperly managed, have both primary and secondary effects on the wider area. The noise and increased activities generated during construction and through increase in population numbers may potentially cause disturbance to the local wildlife, recreational disturbance of SPA wintering birds and degradation of SAC habitat, both potentially resulting from increased visitor pressure caused by the new population. With the impacts of the proposals on the local Natura 2000 sites are assessed fully within the Habitats Regulations Assessment (HRA) Appropriate Assessment (AA) Report (May 2015).

This can, if improperly managed, have both primary and secondary effects on the seafront. The noise and increased activities generated by this may potentially cause disturbance to the local wildlife particularly during the winter months when the SPA qualifying feature bird populations are at their greatest.

The provision of SSAANGs (South Sunderland Areas of Additional Natural Greenspaces) is a positive step in seeking to provide alternative natural greenspaces to divert people from the coast.

The HRA AA reassessment and conclusions note that when mitigation detailed within the HRA, and shown in the SPD, and the assurance of its provision through the detailed implementation, partnering and funding proposals set out within the HRA, are re-assessed against the conservation objectives for each site and the integrity tests it can be concluded that the SSGA SPD will not have an adverse effect on the integrity of the Northumbria Coast SPA/Ramsar site or Durham Coast SAC, either alone or in-combination. It does however note that the HRA is of a strategic level plan and does not remove the need for further HRA at lower planning level tiers and should be used to inform and support project specific HRA where required.

The Durham Coast SSSI shares the same boundary as those designations assessed by the HRA. However the SSSI is also designated for several other qualifying features, these include exposures of geological features, invertebrates (Durham Argus butterfly and last minor moth), sanderling and knot wintering birds, and stretches of open beach habitat. The masterplan is not considered to have a negative effects upon the SSSI and its qualifying features as no physical works are taking place within the boundary or in the immediate vicinity, and the mitigation measures included as part of the HRA AA are considered to be sufficient in mitigating any likely negative effects.

5.2 How can we mitigate / enhance effects?

Adequate survey work including a Phase 1 habitat Survey a Habitats Regulations Assessment (HRA) Report should be carried out given the proximity of the local Natura 2000 sites in order that they are fully assessed and considered. This has now been undertaken, and taken on board in fully developing the SPD and masterplan considerations. The suggested mitigation measures from the HRA should be implemented. Also where required further HRA at lower planning level tiers and should be used to inform and support project specific HRA.

A habitat management plan for the feature should be proposed to enhance what is left, managed by the council, and compensatory planting of trees can be undertaken elsewhere in the Masterplan area.

This could be further enhanced by any potential SuDS measures implemented.

The features and planting should be influenced by any species that could provide a supporting function to the local designations which may ultimately provide an important green corridor.

Furthermore, the green spaces can be enhanced by specific areas managed to be of high biodiversity value through such means as water features and species rich grasslands.

Built development should be of a high quality and compliment the existing topography, landscape features, water courses, wildlife, site orientation and microclimate.

Design Guidance for developers should identify development of a scale and materials in keeping with the character and appearance of the area, as well as a high quality and suitable level of green space, including gardens, play areas, communal areas, boundaries as well as street design.

All development should both protect and enhance habitats and species through habitat creation.

Suitable financial contributions to contribute to the wider area should be considered, for maintenance and management.

SSAANGS should be provided by the developer, and maintained in perpetuity. Suitable legal agreements will be required with planning applications for future development.

Requirement for Environmental Impact Assessment (EIA) Screening and EIA, where necessary, should be identified for Schedule 2 developments.

5.3 Conclusions

Overall there is opportunity through the masterplan and control mechanisms and design guide within the SPD to both protect and improve the areas of biodiversity within the masterplan area, as well as provide a high quality living environment to be enjoyed by the residents of Sunderland and the new community.

Table 5.2: SA Objective 1 – Conclusions of impacts

Type of Impact	South Sunderland Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	The proposals will include the loss of some existing greenfield land within the Masterplan area, however much of this land is arable land not considered of high biodiversity value, and there is opportunity to improve through provision of green networks.	There are a number of proposals for population growth in the local area. These are included in the Core Strategy. These development proposals will in the short term cause disturbance to wildlife during the development period.
Long term	Once the areas of greenspace within the Masterplan area have become established they will provide an important inland habitat and functional green space resource for the wildlife communities. There will be an increase in the population living in this location, using services and frequenting this area of coastline which is within the vicinity of important international designations. With the increased popularity of the location there may be potential issues associated with increasing visitor numbers and pressure on coastal ecosystems. The effects of greenspace landscaping will be long term provided the green spaces within the Masterplan area are well maintained and do not suffer from anti-social behaviour.	Once the areas of greenspace within the Masterplan area have become established they will provide an important inland habitat and functional green space resource for the wildlife communities. There will be an increase in the population living in this location, using services and frequenting this area of coastline which is within the vicinity of important international designations. With the increased popularity of the location there may be potential issues associated with increasing visitor numbers and pressure on coastal ecosystems. The effects of greenspace landscaping will be long term provided the green spaces within the Masterplan area are well maintained and do not suffer from anti-social behaviour.
Areas likely to be significantly affected	Some loss of greenfield land. Potential for impact through increased numbers on coastal areas, that will require to be managed.	
Permanent vs Temporary	If the green space provision is correctly managed and enhanced for its biodiversity value the proposals should provide permanent benefits. However, if improperly implemented any benefits for the local wildlife could be greatly reduced. Increased population numbers that use existing coastal areas is a wider issue that should be dealt with through management of these areas, improved directed walkways and financial contributions to maintain	

	and improve on existing biodiversity assets for the whole population to enjoy.
Secondary	Enhanced environmental infrastructure within the proposals could support the alleviation of flood risk from within the Masterplan area. In addition an attractive and well managed public realm will have economic and social benefits.

6 SECURE SAFE WASTE RECOVERY / DISPOSAL WITHOUT ENDANGERING HEALTH OR HARMING THE ENVIRONMENT (SA OBJECTIVE 2)

6.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria; however it is noted that the list is not prescriptive.

Table 6.1: SA Objective 2 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Live within our environmental limits: Secure safe waste recovery / disposal without endangering health or harming the environment	<ul style="list-style-type: none"> • Protect and enhance sites and habitats designated for their geodiversity value • Protect the human health and environment by producing less waste and by using it as a resource 	<ul style="list-style-type: none"> • Will it protect and enhance sites and habitats designated for their geodiversity value • Will it protect the human health and environment by producing less waste and by using it as a resource • Will it use land that has been previously developed in preference to Greenfield? • Will it reduce household and other forms of waste? • Will it increase waste recovery and recycling? • Will it encourage waste treatment locally? • Will it increase opportunities for domestic recycling? 	Land Resources

6.2 What will the situation be with the Masterplan?

There are likely to be some negative effects on materials assets, for example the loss and fragmentation of agricultural land through land take and through mineral use which tend to arise from the provision of new infrastructure. Specific locations are not currently known; therefore significance of effects cannot be fully determined at this stage.

The Masterplan proposes new land uses including housing, local retail centre, educational uses and associated infrastructure and greenspaces which will involve development on some areas of current greenfield, and will increase the population numbers in South Sunderland. Some loss of arable farming land is likely, which would in turn result in a negative impact on some of the soils within the area. While much of the arable land in the SSGA is of limited ecological value, the soil profile of the SSGA is influenced by the magnesium limestone and does support an interesting combination of plant life, with grassland species along with rare plants.

The SPD acknowledges the need to protect and enhance the designated sites and habitats within the SSGA. The SPD recognises the need to address the Habitats Directive through the provision of Suitable Alternative Natural Greenspaces (SANGs). It is intended that public open spaces will provide complementary recreational and ecological functions. ‘Buffer Zones’ are highlighted as an important element of the Masterplan, suggesting that they will be required to surround areas of important landscape and wildlife features, and the Masterplan states that existing Landscape features of note will require to be enhanced through development (Blakeney Woods LWS, Cherry Knowle Dene LWS, and Ryhope Dene LWS).

The provision of SSAANGs (South Sunderland Areas of Additional Natural Greenspaces) is a positive step in seeking to provide alternative natural greenspaces to divert people from the

coast, which will reduce pressure on sensitive designated areas therein. The Ryhope Coastline lies to the east of the site and forms part of the Northumbrian Coast Special Protection Area (SPA) and RAMSAR site. The coastline also supports part of the Durham Coast Special Area of Conservation (SAC) and Site of Special Scientific Interest designated for its geological and botanical importance. By encouraging fewer people to these areas, localised waste generated by visitors will be minimised.

The SPD acknowledges the adjacent Halliwell Banks contaminated land site which is separated from the SSGA by the B1287. The area however does not affect the SSGA directly; it is recommended that consideration is given to the perception of living adjacent to the landfill when designing the layout of development at the eastern edge of the Growth Area. Additionally, the SPD refers to historic plans that indicate the site was home to several quarries that ceased operations and were filled in during the 1800s. The lack of any records relating to the materials used in the infilling process leaves open the possibility that these areas may present contamination issues, and therefore it is suggested that a Land Contamination Assessment is undertaken to address this risk.

The SPD fails to acknowledge the potential for ground instability linked to the geological conditions of the site. The soluble carbonates present in the ground can create fault-lines and sinkholes which can lead to subsidence, and therefore some ground survey work may be required to clarify issues of stability, and deal with potential changes in ground levels.

The Masterplan will undoubtedly cause population numbers in the SSGA to rise continuously over the extended period of development. Furthermore the SPD includes a number of units to be developed for retail, educational, and community use. This will likely include food stores to serve the residents and consequently there will be increased on site waste generation.

With an increased number of residential and commercial properties in the Masterplan area there will be an increase in wastes generated in the immediate area. However, it is likely these areas will be served by the local household and commercial segregated recycling collections which will consequently reduce the proportion of waste being diverted to landfill.

In addition waste associated with increased levels of dog walking could become prevalent particularly within the areas of green infrastructure in the SSGA.

The Masterplan sets out proposals to ensure that building materials used in the development of the area are to be sustainably sourced and have a reduced environmental impact, also require low maintenance and provide durability to the UK climate.

The SPD aims to encourage both residential and non-residential developments to be constructed to a higher sustainability standard than that provided within building regulations, but could take this further by including requirements incorporating measures to manage waste both during construction and operation. For example by ensuring that all development meets at least BREEAM Excellent construction standards, which is awarded for all sustainable options utilised including the provision of dedicated spaces to cater for the segregation and storage of operational recyclable waste, and the use of a Site Waste Management Plan (SWMP) to help manage the site construction waste produced.

The aim of a SWMP is to promote resource efficiency and to prevent illegal waste activities. Resource efficiency includes minimising waste at source and ensuring that clients, designers and principal contractors assess the use, reuse and recycling of materials and products on and off the site.

In the short term, potentially adverse impacts in relation to the construction phase of the Masterplan are a possibility. These could include the release of pollutants, dust and generation of waste during demolition and construction activities that could have secondary negative impacts on human health. The Masterplan should encourage sustainable waste

management for all development in the SSGA both operationally and during construction. This would include the production of a SWMP.

6.3 How can we mitigate / enhance effects?

To minimise the negative impacts of the loss of greenfield land, mitigation measures can include the reuse of excavated soil, maximum possible reuse of brownfield land, and assessment of the carbon impacts of schemes, where possible. The latter would allow for more specific mitigation measures to be taken to minimise the loss of carbon storage associated with soil removal.

The SPD should acknowledge the threat of both litter generation and dog fouling and should consider the production of a Litter Management Plan and a Dog Control Strategy to tackle the associated negative impacts of these on the environment. The appointment of a coastal ranger/dog warden arose in the mitigation proposals contained within the HRA. This individual would act to raise awareness of key issues and provide a support programme in the local and wider community, and could also assist in addressing the impact of walkers and dogs on waste in the SSGA.

In order to best promote sustainable waste management solutions that encourage the reduction, re-use and recycling of waste, the SPD must pay regard to the requirement to provide for the management of waste in line with the waste hierarchy. In doing so, ensuring there is adequate provision of facilities in appropriate locations, including for waste disposal.

It is a European requirement to reduce amount of waste sent to landfill and the key aims of Sunderland City Council include reducing the amount of biodegradable municipal waste land-filled by 75% from 1995 levels and increase recycling by 50% by 2020. To ensure that these targets are met the SPD should heed the implications for production of municipal waste and where possible integrate with the Council's recycling programme. The high levels of waste production and low levels of recycling and composting in Sunderland mean that local residents must be engaged with, in order to increase recycling rates.

The SPD should investigate the possibility of linking the proposed district heating plant on the site to energy from waste, similarly thorough investigations should be carried out to investigate the potential for use of waste wood as fuel.

Waste produced during construction should be controlled using a Site Waste Management Plan (SWMP), which should be developed from the pre-design stage and implemented for all construction site activities; in line with good practice published by WRAP and DTI. Additionally the SPD will require a Construction Efficiency Statement covering issues such as Lean Construction, costings and Supply Chain Management.

6.4 Conclusions

While the Masterplan will likely increase waste production, associated litter dog fouling, and adversely affect greenfield land, the SPD can also provide an opportunity to help meet local waste objectives and develop functional greenspace with high ecological value.

While the content of the SPD does not directly address this, local efforts adopted by Sunderland City council in general should support the provision of waste facilities throughout the Masterplan area for both public and private use.

Table 6.2: SA Objective 2 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	<p>The Masterplan proposals will utilise greenfield land in the main, appropriate mitigation measures must be in place or this will be considered an adverse effect. The SPD does propose extensive development of green infrastructure to protect and improve the key designated sites.</p> <p>Potentially adverse impacts in relation to the construction phase of the Masterplan are a possibility. These could include the release of pollutants, dust and generation of waste during demolition and construction activities that could have secondary negative impacts on human health. The production of a SWMP could go some way to mitigating this, as would adopt sustainable construction practices.</p> <p>With an increased number of commercial and residential properties in the Masterplan area there will be an increase in waste generated in the immediate area. This can be mitigated through provision of recycling facilities throughout the SPD to encourage a behavioural shift and increase recycling levels in Sunderland.</p> <p>The SPD should aim to address these issues through a separate Litter Management Strategy and Dog Control Plan to reduce waste in the area.</p> <p>The presence of contaminated land on-site is a possibility that will require investigation prior to deciding upon specific mitigation measures. However it is assumed that any potential negative impacts of the Halliwell Banks site can be addressed through careful design and layout of the development of eastern edge.</p>	<p>Legacy Sunderland ARC projects, the LDF and RES will increase number of people within Sunderland. This in turn will increase the potential volume of waste that may be generated throughout the wider Sunderland area.</p>
Long term	<p>The Masterplan will undoubtedly cause population numbers in the SSGA to rise continuously over the long term period of its development. Furthermore the SPD includes a number of units to be developed for retail, educational, and community use. This will likely include food stores to serve the residents and consequently there will be increased on site waste generation.</p> <p>However if the development adheres to the high quality sustainability criteria set out in the SPD, and in the wider sense continues along the upward trends of recycling rates in Sunderland then there should be minimal long term impact on waste.</p>	<p>Legacy Sunderland ARC projects, the LDF and RES will increase number of people within Sunderland. This in turn will increase the potential volume of waste that may be generated throughout the wider Sunderland area.</p> <p>If progress continues to be made towards overall waste targets, the waste generated by the increased population of the SSGA should be minimised.</p> <p>Waste production is likely to continue to rise as has been the trend in preceding years and in line with predictions to 2020. Assuming that the upward trend in recycling continues and with waste management being given higher priority through relevant action plans it is reasonable to assume that the targets for reducing waste sent to landfill will be achieved.</p>
Areas likely to be significantly affected	The SSGA itself would be directly affected.	

Permanent vs Temporary	The increase in municipal waste generation would be permanent, while waste generated during the construction phase would be temporary.
Secondary	Waste making its way to the beach could impact upon the populations of Little Tern, Turnstone and Purple Sandpiper that use the designated SPA and SAC.

7 PROTECT WATER SOURCES FROM CONTAMINATION AND MINIMISE THE RELEASE OF HARMFUL PRODUCTS INTO THE ENVIRONMENT (SA OBJECTIVE 3)

7.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 7.1: SA Objective 3 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Live within our environmental limits: Protect water sources from contamination and minimise the release of harmful products into the environment.	<ul style="list-style-type: none"> Improve the water quality of river, ground and coastal waters that are considered to be 'at risk' of not meeting WFD objectives, requirements and consider recommendations from the Northumbria River Basin Management Plan Ensure that the current water and sewage capacity can accommodate the impact of new development and regeneration strategies Ensure surface water run-off is managed in a sustainable manner, to reduce flood risk whilst improving water quality 	<ul style="list-style-type: none"> Will it improve the water quality of river, ground and coastal waters that are considered to be 'at risk' of not meeting Directive objectives Will it ensure that the current water and sewage capacity can accommodate the impact of new development and regeneration strategies Will it ensure surface water run-off is managed in a sustainable manner Will it limit development in the flood plain? Will it reduce the number of properties affected by flooding incidents? Will it assist in preparing Sunderland for impacts of climate change? Will it reduce water consumption and generation of wastewater? Will it encourage the re-use of water? 	Water Quality and Resources

7.2 What will the situation be with the Masterplan?

Within the SSGA, the change from primarily greenfield land to a built up area that will house a large number of residential units, will greatly increase the amount of polluted waste water generated compared to existing levels. Surface materials used within the Masterplan area may potentially increase the volume of polluted water into the coastal zone during high rainfall events. Water falling on impermeable surfaces may collect surface contaminants and has the potential to be discharged directly into ground, surface or coastal waters if improper waste water infrastructure is not adequately provided through the proposals. The coast would be a receptor of any negative impacts on water quality and it is likely the problems of contaminated coastal waters encountered will become more frequent.

Additionally the SSGA lies on the Magnesian Limestone principal aquifer with large areas located within a currently designated groundwater Source Protection Zone. The aquifer is a highly sensitive environmental receptor and is an important source of water for a large number of public, private and industrial supplies. The Masterplan proposals will potentially increase pressure on this receptor due to increasing levels of contaminated urban runoff, however due to the loss of arable land that will result from development, sources of diffuse agricultural runoff will be lessened.

As diffuse agricultural and urban surface water runoff is the common sustainability theme applicable to groundwater and to the three river catchment areas in the SSGA, the SPD recognises the pollution risk presented by increases in urban runoff, and suggests the implementation of SUDS schemes which can act to prevent pollutants reaching water bodies.

The SPD includes a requirement for developers to contribute to the implementation and maintenance of SUDS schemes and should also ensure specific proposals for SUDS are considered as early as possible and are prepared for inclusion with specific proposals. The schemes should aim to mitigate for any extra loading on the identified catchments, and even contribute towards them achieving good ecological status.

In terms of water quality, it is difficult to come to a conclusion regarding the potential for development at any given location to result in negative effects without an understanding of the specific SUDS measures identified. Ideally, SUDS within the SSGA would:

- Ensure that any urban run-off, particularly from new roads is fed into retention and treatment features;
- Look to incorporate poor surface water drainage from any of the neighbouring areas into these new SUDS features to help address existing reasons for failure;
- Develop green infrastructure that doesn't require artificial nutrients for establishment and maintenance; and
- Identify surface water flow routes within the site, look to protect and incorporate these into a green infrastructure plan for the development.

Additionally, the western area of the site lies within a critical drainage area, and is especially sensitive to surface water flooding; SUDS can play an imperative role in ensuring the development has effectively manages water quantity and improves water quality in this regard. Issues of flooding are fully discussed under SA Objective 5.

The SPD recognises that the proposed development will undoubtedly require the provision of adequate utilities infrastructure – including water and sewage – to be put in place to appropriately manage the levels of consumption and waste water generated by the new community. Furthermore it stresses the need for early action in considering the connection of new builds to this infrastructure, something that should ensure substantial capacity and protect the water quality of the aquatic environment.

7.3 How can we mitigate / enhance effects?

The SUDS employed in the SSGA could be maximised by aiming to produce wider benefits for amenity and biodiversity by linking effectively to green infrastructure in the surrounding area and existing wildlife corridors e.g. the potential South Sunderland Areas of Additional Natural Greenspaces (SSAANGs) discussed in the SPD and associated HRA. Any development should consider the relationship with SUDS as a key asset that will bring about a number of benefits including leisure activities, visual amenity and landscape improvements, biodiversity enhancements, wildlife corridors, floodplain creation, and a safeguard against the effects of climate change.

Additional surveys may be required as part of any detailed design proposals and all development proposals will need to be informed by discussions with Northumbrian Water to ensure that connections to proposed development can be made to provide water and sewage at the earliest possible stage. Any proposed surface water discharge to the sewer should also be lessened as much as possible to allow for the required growth within the SSGA and to reduce the pressure on existing sewer systems. Consideration should be given to restricting or preventing surface water discharge to the sewer wherever SUDS can be used to deal with surface water run-off instead.

The development of SSGA represents an opportunity to provide investment to the local waste water infrastructure capacity in order to meet not only the demand established by the development but also tackle the pre-existing issues regarding the contamination of coastal waters.

The SPD does cite the use of green roofs and responsibly sourced building materials as being important in the delivery of the sustainability aspirations of the SSGA. However to maximise the sustainable use of water within the SSGA, the SPD could include requirements incorporating measures to manage water use and run off – For example by ensuring that all developments meet at least Level 4 of the Code for Sustainable Homes for housing or BREEAM Excellent construction standards for all other developments, which are awarded for all sustainable technologies including water conservation and water butts. Opportunities also exist for grey water recycling from rainwater harvesting. Finally, the likelihood for extensive hard standing within the Masterplan area is high, thus the potential for surface water contamination could be reduced with the provision of permeable paving or grasscrete.

7.4 Conclusions

While development in the SPD is unlikely to cause clear detrimental effects to local water resources, the area is inextricably linked to this resource. Any contamination of water in the nearby catchment areas or coastal zone could compromise the positive effects of these proposals. However, the SPD acknowledges this threat and makes positive provisions to alleviate this through SUDS provisions and the promotion of sustainable designs for all buildings in the proposals.

Table 7.2: SA Objective 3 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	<p>Water quality and quantity would be likely to be adversely affected by new development particularly in the absence of a plan that sets out the appropriate distribution and phasing of development to take into account infrastructure and environmental constraints.</p> <p>The rise in new resident numbers to the SSGA and potential for increasing waste may cause a slight increase in the potential for contamination of local coastal and surface waters.</p> <p>Housing and retail developments will increase the pressure on the waste water infrastructure within the local, issues of limited capacity may arise.</p> <p>However, the SPD acknowledges this through the provision of SUDS throughout the development and positive measures to ameliorate contamination and reduce flood risk.</p> <p>Additionally, the degree of support in the SDP for sustainable construction will alleviate the risks of the development.</p>	<p>The growth proposed within the Core Strategy may act in tandem with the pollution and water use issues associated with the Masterplan.</p> <p>Additional pressure on the sewage system by new development could lead to an increase in the instances of contamination of coastline waters which are already considered to be ‘at risk’ of not meeting objectives of the Water Framework Directive. It is reasonable to assume that there will be additional development in Sunderland without the Masterplan, even without development or change within the Masterplan area itself.</p>
Long term	<p>The Masterplan acknowledges the long term risks associated with the impacts of climate change and prevents development in high risk flood areas. This will limit potential contamination of terrestrial and coast waters should future storm events occur (see SA Objective 5).</p> <p>It is likely with increased development of the SSGA investment will be made into local waste water infrastructure to ensure there is capacity for the excess waste water produced in the locale and reduces the likelihood of the existing coastal</p>	<p>The location of the SSGA means there are strong links to water resources and climatic factors such as flooding. As heavy rainfall and extreme weather events become more prevalent the chances of contamination and flash flooding events will also become greater. This potentially causes increases in sediment load in coastal waters and</p>

	contamination.	consequently turbidity which can have serious deleterious effects on aquatic and marine life. In the long term there will be substantial growth in housing numbers within Sunderland producing waste water. Combined with predicted increases in heavy rainfall and more prevalent extreme weather events, the chances of contamination and flash flooding events will also become greater. This has the potential to increase incidents of pollution of coastal waters. However, it is considered that this potential will be reduced by the proposals contained within the River Basin Management Plan and from improvements to water infrastructure undertaken by the water provider.
Areas likely to be significantly affected	The Water Framework Directive catchment areas of Doxford Park to Hendon Coastal Area, Ryhope Coastal Area, and Burdon to Ryhope Coastal Area could potentially have a reduction in water quality.	
Permanent vs Temporary	If pollution incidents were not annual or continuous, effects would be temporary. Sustainable drainage systems and effective wastewater disposal within the SSGA will alleviate these effects	
Secondary	Climatic forecasting indicates that the prevalence of heavy precipitation and extreme weather events are likely to worsen meaning that incidences of flooding and contamination would also be greater. This may have detrimental impacts for the quality of bathing waters along the coastline. This aside, the quality of water should improve/be mitigated as a result of continued monitoring by the Environmental Agency, as has been the trend in recent years.	

8 MINIMISE POLLUTING ACTIVITIES AND CONTAIN AIR POLLUTION TO WITHIN ACCEPTABLE LIMITS (SA OBJECTIVE 4)

8.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 8.1: SA Objective 4 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Live within our environmental limits: Minimise polluting activities and contain air pollution to within acceptable limits.	<ul style="list-style-type: none"> Ensure development supports efforts to reduce all forms of pollution, and in particular the effects of motor vehicles 	<ul style="list-style-type: none"> Will it ensure development supports efforts to reduce all forms of pollution, and in particular the effects of motor vehicles Will it encourage healthy lifestyles, including travel choices? Will it enhance community and public transport? Will it reduce the need to travel for long distances? Will it reduce the need to travel for commuting? Will it reduce traffic volumes? Will it encourage travel by means other than the car? 	Air Quality & noise

8.2 What will the situation be with the Masterplan?

Development of new infrastructure such as those proposed within the Masterplan have the potential for adverse effects from pollution on water quality (discussed in Section 7), ground conditions (discussed in Section 6), air quality and noise levels (discussed in this Section).

Potential adverse effects from new infrastructure can occur directly during construction, through the creation of noise, dust and emissions, and indirectly if increased road capacity encourages greater use of private vehicles and causes congestion. However, some development, such as the creation of, and extension to, walking and cycling paths and green space, have the potential for positive effects by promoting active travel, improving access to a functional environment and indirectly improving human health.

The demand for all forms of transportation will increase as a result of the Masterplan. As discussed above the increased road capacity has the potential to cause adverse effects; however the Masterplan also details proposals to make provision for increased public transport and non-motorised vehicular transport. If these proposals cause a decrease in the uptake in private vehicle use then they can help mitigate adverse impacts, thereby having a positive impact upon air quality. The scale of this is currently uncertain and will be dependent upon the level of uptake but represent an opportunity to provide additional public transport services to the SSGA and wider Sunderland area and to facilitate a modal shift away from private vehicles.

The Masterplan proposals are also likely to cause an increased demand for energy at a local level due to new development. This will have impacts not only on climate change (see Section 9 below) but will also increase airborne pollution by contaminants associated with power generation. While these effects are not likely to impact on localised air quality, they will have regional environmental impacts. However, the SPD supports the use of sustainable energy production and energy efficient development. Furthermore, as part of the SPD a SSGA Renewable Energy Study (2013) was undertaken to inform the SPD and explore opportunities. If the outcomes of this are implemented this could help reduce local air quality issues associated with the increased energy demands.

8.3 How can we mitigate / enhance effects?

The implementation of mitigation measures during construction will help to minimise the adverse effects of new infrastructure. Mitigation measures could include undertaking of an EIA, where required, including air quality assessments; and the designing and timing of the schemes and construction works to prevent or reduce air quality effects on potential receptors will help to minimise these effects.

Effects on air quality by increased vehicular usage can be mitigated through the SPD strengthening and highlighting access routes around the SSGA by walking, cycling and public transport. This will also help to promote equality of access for those people who do not have a car.

The proposals could be further enhanced by the provision of facilities for cyclists such as storage and changing areas. Furthermore, the allocation of specific lanes throughout the site for cycling in will provide legibility and permit a safe and hazard free experience for all the users within the SSGA. This will encourage more people to use this area for recreation and short range transportation and dissuade long vehicle journeys.

The Masterplan should limit provision of parking to dissuade people from using private transport where possible. Provided there are sufficient and efficient public transport services, this will not detract from the proposals.

8.4 Conclusions

In summary the Masterplan proposals will result in new development and the permanent and temporary increase in the population of the area. This is likely to result in adverse impacts which may be significant during the construction stage. The long term impacts of the Masterplan are currently uncertain due to the promotion of public transport, active travel and sustainable energy production, all of which may mitigate against an increased population, road capacity and energy demand.

Table 8.2: SA Objective 4 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	The proposals within the Masterplan will cause considerable new development and increase the permanent and temporary population of the SSGA. This will result in potential significant adverse effects if not mitigated especially during construction.	Population growth in Sunderland and in particular the new and Sigllion proposals and focus on retaining and growing the populations will have some adverse impact if developments. Again a reasonable proportion of these are likely to travel by motor vehicle.
Long term	The increased uptake of public transport, active travel, implementation of sustainable energy solutions and improvement in vehicular technology has the potential to reduce the adverse impacts which are expected in the short/medium term. However it is still considered that increased energy demand and population may have a slight adverse impact.	Population increase will increase energy demands and private vehicle use which may outstrip advances in efficiency and implementation of alternative sustainable sources. This may still result in issues of deterioration of local air quality within other parts of Sunderland.
Areas likely to be significantly affected	Localised air quality in the SSGA is likely to decline, the proposals may also result in air pollution along main transport corridors where air quality may already be poor.	
Permanent vs Temporary	Air quality itself can be improved relatively quickly by removing the causes of pollution.	

	However its secondary impacts – particularly on human health and biodiversity – can be permanent.
Secondary	Worsening air quality would negatively affect human health (e.g. poor air quality can lead to respiratory health problems), biodiversity (e.g. acidification of habitats), and water quality.

9 ADAPT TO AND MITIGATE AGAINST CLIMATE CHANGE (SA OBJECTIVE 5)

9.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 9.1: SA Objective 5 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Adapt to and mitigate against climate change	<ul style="list-style-type: none"> • Make an equitable contribution to helping the UK cut its carbon dioxide emissions by 60% by 2050 • Reduce the cause and impacts of flooding • Address the risk and impacts of coastal erosion • Support the delivery of sustainable buildings • Ensure that a significant proportion of the energy supply of substantial new development is gained on-site and from a renewable source and/or from a decentralised, renewable or low-carbon, source 	<ul style="list-style-type: none"> • Will it make an equitable contribution to helping the UK cut its carbon dioxide emissions by 60% by 2050 • Will it reduce the cause and impacts of flooding • Will it address the risk and impacts of coastal erosion • Will it use land that has been previously developed in preference to Greenfield? • Will it reduce emissions of greenhouse gases? • Will it reduce traffic volumes? • Will it encourage travel by means other than the car? • Will it assist in preparing the Sunderland for impacts of climate change? • Will it assist in new homes meeting the BREEAM standards? • Will it increase the proportion of energy needs being met from renewable sources? • Will it reduce the demand for energy? 	Climatic Factors, Energy and Flooding

9.2 What will the situation be with the Masterplan?

The majority of the Masterplan proposals involve development of greenfield and agricultural sites which have the potential to increase the risk of surface water flooding and reduce carbon sequestration, especially for the downstream or to the surrounding community. However the Masterplan acknowledges the flood and drainage risks to the site and the provisions of the NPPF, Core Strategy and the flood risk, SuDS and surface water flooding policies proposed by the SPD would help limit adverse effects in this regard.

In terms of the effect of new development on surface water run-off, the SPD supporting text seeks to ensure that there is sufficient sewerage capacity to accompany new development areas.

The development proposed by the Masterplan is likely to cause an increase in water use and therefore adversely affect water availability. However the implementation of sustainable design and construction to create more efficient homes may help negate these adverse effects although this is not explicitly stated within the SPD.

Enhancements to green infrastructure networks promote climate change mitigation through supporting carbon sequestration and promoting sustainable modes of transport and climate change adaptation through helping to limit the effects of extreme weather events and regulating surface water run-off. In this context the plan's focus on the protection and enhancement of green infrastructure provision in the Masterplan area will support these elements.

Transport is considered one of the largest sources of emissions leading to climate change. Road transport will be an increasingly significant contributor to greenhouse gas emissions in the Masterplan area as vehicular access will be supported by new parking provision.

The Masterplan illustrates several areas for bus routes and multi-user routes. By reducing the need to travel, promoting sustainable transport policies and planning for a move towards a sustainable transport network within the SSGA will offer opportunity to decrease vulnerability and increase resilience to its effects. In addition, the accessibility of a range of services, facilities and amenities will support climate change mitigation through limiting the need for residents to travel and good links to the towns can be supplement this provision.

Provision of housing and further development will result, directly, in increased demand for energy that exceeds the existing demand in the area. This is based on the fact that each additional resident would increase the amount of energy used. This will have an associated regional increase on greenhouse gas emissions which will exacerbate the effects of climate change further.

The only way to prevent an increase in overall energy demand would be implanting policy that required all new development to be zero carbon. The SPD acknowledges that high energy efficiency and minimal energy consumption is necessary in this large scale development. Consequently, the SPD states that *'in line with its economic masterplan aims, will still encourage both residential and non-residential developments to be constructed to a higher sustainability standard than that provided within building regulations'*.

The SSGA Renewable Energy Study (2013) identified that a central energy centre with district heating potentially fired by a lead biomass boiler would be an appropriate option for SSGA. The council will further explore the opportunity of District Heating at SSGA and if implemented these proposals would further support climate change mitigation.

The Masterplan will further help increase the resilience of ecological networks to the effects of climate change through making provision for habitat management and enhancing biodiversity corridors as suggested through the Habitat Regulation Assessment.

9.3 How can we mitigate / enhance effects?

The SPD should seek to ensure that development includes the mitigation measures detailed within the Habitat Regulations Assessment and ensure like-for-like replacement of woodland takes places to ensure a reduction in the capacity of carbon sequestration in the area is limited.

The SPD should also expand to reflect water consumption and climate change adaption. In addition, SuDs can provide both water conservation measures but also climate change adaptation measures. The SuDs proposals should reflect the ability of SuDs to provide both.

9.4 Conclusions

When viewed as a whole the SPD is unlikely to cause negative effects upon the ability of the SSGA to mitigate and adapt to climate change. Although the housing and further development will result in a change of land use, increased road capacity and increased energy demands, the SPD also includes measures which support walking/cycling and use of public transport,

renewable energy provision, energy and efficient developments and provision of habitat management and green corridors which will negate the likely adverse impacts.

Table 9.2: SA Objective 5 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	<p>The development proposed with the Masterplan will cause a change of land use from greenfield/agricultural land.</p> <p>The SPD acknowledges flood risk and makes provision to safeguard this from development through green space provision, use of SUDs and other green infrastructure.</p> <p>Although it is likely that the Masterplan proposals will increase the road capacity and parking provisions, it also includes proposals for increased public transport and multi-user paths.</p> <p>Furthermore, an increase in development within the Masterplan area will increase local demand for energy. Both these factors will consequently increase greenhouse gas emissions associated with the site which will exacerbate climate change in the short term.</p>	<p>Alongside the SPD a Coastal Erosion Strategy for Sunderland's coastline will be developed. This will help to analyse and advice upon the implications of coastal erosion and subsequent flood risk for mitigating the risk of flooding for premises in the Masterplan area.</p> <p>Furthermore, A Climate Change Action Plan for Sunderland outlines measures to meet City's commitment to climate change which if implemented throughout the Masterplan proposals will have significant regional benefits.</p>
Long term	<p>By encouraging maintenance and high quality design of features it is considered that the Masterplan will be able to adjust to extreme climatic events.</p> <p>In the longer term it is expected that the provision of public transport and multi-user paths will increase uptake of sustainable travel alternatives. In addition vehicles technology will improve and emissions from private vehicles would reduce to negate the predicted short term increases. Furthermore, it is likely that more energy will be produced from renewable sources.</p>	<p>Coastal change and erosion influenced by the pattern of sea defence along the coastline will have important implications for the future of Masterplan proposals.</p> <p>The Shoreline Management Plan 2 (SMP2) highlights increasing pressure on sea defences, with the potential threat of the low water moving landward and causing steepening of beaches, increased pressure on sea defences and loss of amenity. Assuming that land use policy in Sunderland adheres to the policies promoted in SMP2 the Masterplan area can to a large degree be protected from the changing climate.</p>
Areas likely to be significantly affected	<p>The precise areas that may be affected as a consequence of emissions generated on site cannot be determined at this level of assessment. However, adaptation measures will be beneficial for the SSGA and Sunderland area.</p>	
Permanent vs Temporary	<p>Changing patterns of emissions and thus alterations to climate can be considered to be permanent as can many of the potential effects such as erosion.</p>	
Secondary	<p>Climate change caused by emissions of greenhouse gases and the climatic effects associated with this can affect human health, biodiversity and the local economy in particular.</p>	

10 PROMOTE, ENHANCE AND RESPECT THE REGION’S CULTURE AND HERITAGE (SA OBJECTIVE 6)

10.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 10.1: SA Objective 6 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Promote, enhance and respect the region’s culture and heritage	<ul style="list-style-type: none"> • Protect and enhance historic built environment by ensuring viable uses • Prevent new development which is at odds with the character of the site • Preserve the historic environmental infrastructure 	<ul style="list-style-type: none"> • Will it protect and enhance historic built environment by ensuring viable uses • Will it prevent new development which is at odds with the character of the site • Will it preserve the historic environmental infrastructure • Will it create vibrant, multifunctional countryside in and around towns? • Will it protect and enhance the historic environment within built-up areas? • Will it protect and enhance open spaces of amenity and recreational value? 	Heritage and Landscape

10.2 What will the situation be with the Masterplan?

South Sunderland benefits from an attractive and varied topography. The SPD through the provision of housing and economic development will result, directly, in land take within the SSGA much of which is rural in nature, undeveloped greenfield/agricultural land and a portion is identified as a ‘District Corridor’ (Sunderland’s green Infrastructure Strategy Framework 2011). The land take and building of the new developments has been identified as a threat to the character of the area and also has the potential for impacts to the townscape and biodiversity.

The development undertaken by the SPD has the potential to impact upon the views from the surrounding settlements, especially those north of the SSGA, and drivers along the B1728. The Masterplan details attempts to minimise these impacts by limiting the height of the buildings and undertaking landscaping, streetscape improvements and key changes to the land use, which are all aimed at mitigating visual impacts as a result of development. The development itself will offer panoramic views of Sunderland for residents and visitors to the SSGA with the chimney of the Ryhope Engine Museum providing a landmark on the skyline. The SPD also states that *‘where possible, views should be protected and where viable enhanced. Development should be located and orientated to maximise view points and vistas’*.

Due to the greenfield nature and lack of existing built form, the development of the growth area provides an ideal opportunity to create its own unique character that distinguishes itself from the surrounding built environment. As a result the SPD has a strong focus on protecting and enhancing landscape and townscape quality in the SSGA, and supporting the conservation and enhancement of the historic environment. For example, supporting the landscape setting of the area, the SPD states that *‘proposals which do not respect the natural and built context of the site or create a locally distinctive character will not be considered accepted’*. This seeks to ensure that the built form of new development minimises the visual

impacts and relates sensitively to the surrounding areas. In this context the Design Guide provides a robust basis for protection, setting out features which are regarded as important and suggesting ways in which these can be maintained and enhanced through a series of development guidelines and key principles.

The SPD also provides a focus on protecting and enhancing, habitats, green space and open spaces and supporting improvements to green infrastructure networks. It ensures that development is delivered without a significant loss of habitat, while providing new open space within allocated areas aiding habitat connectivity and connecting the community both within the SSGA and wider Sunderland area. This will support landscape and townscape quality and the setting of the historic environment in the SSGA and help to integrate SSGA within the setting.

The SPD notes the significance of the Ryhope Pumping Engines scheduled monument and several listed buildings, and proposes housing allocations in close proximity to these assets. Therefore the potential for adverse effects upon the setting of these heritage assets exists. However the setting of the buildings is already much influenced by the surrounding housing uses, and so it is not considered likely that additional development will have a significant negative impact. There will nonetheless be the potential for negative impacts (primarily as a result of increased traffic) that will need due consideration.

The proposals will have an uncertain impact upon archaeological sites, five of which are known to exist within Cherry Knowle and South Ryhope, as ground disturbance could expose features of archaeological interest that should be investigated and recorded as part of the Masterplan proposals. The significance of the effects will be dependent upon the exact presence of historic assets, but can also be minimised through the implementation of mitigation measures such as an Archaeological Watching Brief.

The net effect will be that the heritage of the greater area will be opened up to the public both physically and intellectually. It is hoped this will draw people to the area and that understanding and appreciation of the culture and heritage of the wider area will be enhanced.

10.3 How can we mitigate / enhance effects?

It will be important that those people using and attracted to the SSGA understand and appreciate the heritage features and means to educate and communicate with visitors should be positively encouraged throughout the document.

The designs of the proposed development should acknowledge the Victorian roots of the Ryhope Pumping Station and Museum and be sympathetic to the urban character of the local surrounding areas and where possible enhance the significance and setting of this heritage assets. In addition, proposed development in close proximity to these assets should be supported by a Heritage Impact Assessment.

It should be noted that, careful consideration is needed to ensure that vegetation and planting does not obstruct views, access arrangements and other requirements of the space.

It is suggested that close consultation with local experts, informal discussions with the local community, plus site-based analysis and desk-based assessments of relevant reports, studies and policies continue to be undertaken to help measure the significance of any planned changes in landscape value, assess the likelihood of impacts and to determine the cost/benefit of any detailed mitigation and enhancement measures proposed. It is also anticipated that Landscape and Visual Impact Assessments of the proposed elements may be required as part of the EIA process to support the project development.

In addition, in line with Annex 2 of the NPPF (Paragraph 128) an appropriate desk-based assessment and field evaluation should be undertaken, and where required archaeological monitoring of ground works, should be undertaken in the vicinity of known archaeological

sites. The requirements and detailed terms of which will be agreed with the English Heritage and planning authority as advised by the Archaeology Service.

10.4 Conclusions

It is concluded that whilst there is the potential for the SPD to have an adverse impact upon some existing views and the rural, undeveloped character of the site, there are also some uncertainties relating to the impact upon archaeological features, the proposals made within the Masterplan and the SPD offer opportunity to result in significant positive effects upon the baseline heritage and landscape position; if managed.

Table 10.2: SA Objective 6 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	It is likely that the proposals will contribute significantly to greater local understanding of existing heritage features, and improve on their settings if design is managed correctly.	The Sunderland Core Strategy principals should help to promote understanding, protection and enhancement of the cities cultural and heritage offering. If the Wearmouth-Jarrow UNESCO World Heritage site proposals are successful the Sunderland coast could form a key highlight of the route between St Pauls and St Peters churches. As part of the Sunderland Arc regeneration programme a planning framework and SPD is being prepared for the Bonnersfield/St Peters area that incorporates the candidate world heritage site. The SPD should seek to promote mixed-use development that is sensitive to and enhances the heritage features. It is considered that enhancements to the heritage features can work in tandem with the Masterplan proposals to promote the wider area.
Long term	It is likely that the proposals will contribute significantly to greater local understanding of existing heritage features, and improve on their settings if design is managed correctly.	The Sunderland Core Strategy principals should help to promote understanding, protection and enhancement of the city’s cultural and heritage offering.
Areas likely to be significantly affected	It is concluded that whilst there is the potential for the SPD to have an adverse impact upon some existing views and the rural, undeveloped character of the site and there are also some uncertainties relating to the impact upon archaeological features, the proposals made within the Masterplan and the SPD offer opportunity to result in significant positive effects upon the baseline heritage and landscape position; if managed correctly.	
Permanent vs Temporary	If implemented successfully the proposals should provide permanent benefits in terms of impact on the cultural appreciation of visitors.	
Secondary	The location of the site could enhance interest and use in other heritage features such as the candidate Wearmouth-Jarrow UNESCO World Heritage site. Improving the understanding and appreciation of heritage of the wider area and coast. A field, may help to improve the sense of place and landscape of this part of Sunderland’s coastline. In turn this may help to influence the design and use of new and old built environment in the vicinity. Furthermore encouraging visitors will have positive benefits for the local economy.	

11 IMPROVE HEALTH AND WELL-BEING WHILE REDUCING INEQUALITIES IN HEALTH (SA OBJECTIVE 7)

11.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 11.1: SA Objective 7 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Improve health and well-being while reducing inequalities in health	<ul style="list-style-type: none"> • Encourage recreation that will contribute to the health of residents and visitors • Improve pedestrian and cycle routes to promote healthy modes of transport 	<ul style="list-style-type: none"> • Will it encourage recreation that will contribute to the health of residents and visitors • Will it improve pedestrian and cycle routes to promote healthy modes of transport • Will it reduce rates of sickness and death? • Will it improve accessibility to local GP? • Will it reduce noise pollution? 	Community Health, Equality and Education

11.2 What will the situation be with the Masterplan?

Effects on health and wellbeing will depend on factors such as the provision of new services and facilities to accompany new development, the quality and energy efficiency of new housing, and enhancements to open space provision and green infrastructure (GI) networks, including pedestrian and cycle links.

The Masterplan has at its core the intention to create an area that will provide opportunities to enjoy the SSGA by creating well connected and improved internal greenspace to create the feeling of a single unified recreational offering. The SPD objective, *“Provide new facilities including local centres, primary schools and open space where the greatest number of new and existing residents can access them easily and safely”*, signals this intent.

Primarily, the SPD ensures the recreation needs of the local residents are to be met through the provision of a high degree of amenity green space, access to sports fields, and through the overall intent that the community will be easily navigated through active travel.

The Masterplan aims to transform the greenspace of the SSGA into a functional community resource. For example, the GI in the SSGA will link and maintain the integrity of current protected areas such as Blakeney Woods LWS, with other woodland in the south of the site and also to an area of allotments. Currently the greenspace in the SSGA has low value in regard to recreational use and biodiversity, mainly due to the majority of the area being in use as arable farmland. It is reasonable to assume that the development of strong GI will have a positive impact on the health of residents. Further discussion of the greenspace provisions made in the SPD can be found under SA Objective 1 (Section 5).

The Masterplan acknowledges the link between active travel and the health of its residents. By incorporating quality design and place-making that puts pedestrians and elements of the natural environment at the top, the Masterplan can create appealing, prosperous and sustainable environments that improve health and well-being, economic activity, civic pride and a sense of community.

In particular, providing access to a well-lit, safe and pleasant walking/jogging/cycle routes through the SSGA, the SPD can go some way to addressing widespread health concerns including obesity, heart disease and other associated conditions linked to a lack of exercise.

Specifically, by designing safe routes to the primary school/local centre for parents and children, active travel can be encouraged from an early age.

Pedestrian routes are to be mainly pathways, pavements and shared surfaces which should (where possible) be linked with areas of GI. The connecting routes allow for ease of movement and encourage pedestrians throughout the SSGA and existing development areas to the north.

Cyclists are to be generally accommodated along street networks; however connections will be made to join the existing cycle networks that skim the SSGA such as National Cycle Network Route 1 and the Walney to Wear (W2W). This may result in improvements or re-alignment of these existing routes.

The SPD recognises there will be a need to reduce the number of pedestrians/cyclists which may be interested in the coast. For this purpose it identifies that recreational paths should not increase the current accessibility to the coast which in turn would apply pressure to the sensitive SPA/Ramsar and SAC areas. Instead the emphasis is to be shifted to the SSANGS which should act as a draw to visitors and act to mitigate their impacts on the SPA.

The Masterplan will have the net effect of attracting greater use of SSGA and will provide more opportunities for healthy activity through the use of new and connecting recreational paths. It is therefore reasonable to assume that the Masterplan will contribute to improving health. Further discussion of the sustainable transport provisions made in the SPD can be found under SA Objective 12 (Section 15).

The Masterplan illustrates consideration of community services and facilities within the SSGA; accessibility to services is an important factor in encouraging more healthy modes of travel. The SPD incorporates a number of proposals to locate community centres, sports pitches, and a primary school within the SSGA itself. Additionally, pre-existing facilities out with the development area will provide support to the residents; particularly the Ryhope and Doxford local centres. The new homes in the SSGA will also assist in sustaining and improving the services and facilities in these locations.

With regard to Health Services provision, the Masterplan identifies that existing GP practices and dentists are located in nearby Ryhope, Silksworth and Doxford however these are not considered to be in walking distance of the SSGA. This could potentially have a negative impact by encouraging the use of private car to travel these distances.

Similar impacts may result from journeys to schools, nurseries, and day care facilities out with the walking range of the SSGA prior to the eventual construction of the primary school/nursery at the Land North of Burdon Lane.

11.3 How can we mitigate / enhance effects?

Site specific survey work and assessments will have to be undertaken to fully judge the impact on human health in the SSGA, including a Noise Assessment to judge the impact of noise from the surrounding roads (such as the A19) on the immediate areas of the site that they border. Additionally, an Open Space, Landscape and Recreation Strategy would allow for full enhancement of the greenspace provisions in the SPD and allow for consideration of additional facilities for recreation in the SSGA. For example added features such as outdoor gym equipment.

To some extent the negative impacts of potential additional private car journeys to health and educational facilities out with the SSGA can be mitigated by the proposals for additional public transport to serve the area. This however is dependent on the specific route of any additional bus line, for example. Furthermore, careful linkage to existing cycle routes that pass through the SSGA, alongside the creation of new ones would allow for these journeys to be made by bicycle.

11.4 Conclusions

The link between recreation and healthy lifestyles is strong, and the SPD has at its heart intent to maximise the recreational use of the SSGA. The overall intent of the Masterplan is to create a layout that will encourage residents to cycle and walk to locally centred community facilities and beyond, through attractive and functional greenspace. It is therefore reasonable to assume that the Masterplan will contribute to improving health. Challenges centre on ensuring that these features are in place for the completion of any housing so a strong precedent for active travel in the area is set from the outset.

Table 11.2: SA Objective 7 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	<p>Many of the measures included in the SPD can be implemented in the short term. Landscaping features can quickly change the appearance of the SSGA and increase recreational use in the short term; moreover the delivery of the SSAANGs is intended to precede housing construction. It is considered that these measures would promote healthier lifestyles.</p> <p>Provision of local facilities combined with good access within the SSGA would provide residents opportunity to make healthier travel choices, either on foot or by bike. By providing more capacity within existing nearby primary schools in the short term, the proximity of existing schools would mean that the option of walking would be less attractive.</p> <p>However this may be mitigated by connections and improvements to current cycle paths leading North.</p>	<p>The SPD would work in line with the healthy city agenda and the programmes that this involves to improve levels of health across the city.</p>
Long term	<p>The Masterplan will provide opportunities for some people to make significant long term improvements to their levels of health. However, it is reasonable to assume that most use will be occasional and benefits will be of a minor significance.</p> <p>In the long term there will be the provision of a primary school in the area itself. The development of easily accessible social infrastructure within the SSGA will contribute positively to the health and wellbeing of the residents.</p> <p>The SPD's impetus on GI enhancements will support the health and wellbeing of residents by facilitating improvements in levels of physical activity, enhancing social interaction between residents and promoting psychological well-being.</p>	<p>The Masterplan can be considered in conjunction with other local GI provision and needs and other programmes such as the overarching Sunderland Green Infrastructure Strategy and Core Strategy. This coordinated approach to green infrastructure in the city will help ensure that the full range of multifunctional benefits from a high quality GI network can be realised. It is considered that this could increase the opportunities for active and healthy lifestyles in the city.</p> <p>Also in association with programmes under the healthy city agenda it is considered likely that there will be significant positive health effects in the long term.</p>
Areas likely to be significantly affected	The population of the SSGA will have the greatest opportunities for improved health and wellbeing associated with the Masterplan.	
Permanent vs Temporary	Community wellbeing and good health take a long time to build up, good health starts before birth. The impacts of the SPD would therefore be permanent.	
Secondary	<p>Increased recreational and health use of this land will promote economic activities through retail and recreational activity.</p> <p>By establishing a high quality, extensive level of GI in the area, residents will be less inclined to frequent the SPA/Ramsar and SAC areas. Instead the emphasis is to be shifted to the SSANGS which should act as a draw to visitors and act to reduce the overall pressures on the sensitive areas.</p>	

12 BUILD SUSTAINABLE COMMUNITIES (SA OBJECTIVE 8)

12.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 12.1: SA Objective 8 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Build sustainable communities	<ul style="list-style-type: none"> Promote and encourage community involvement and participation Stem the declining population by reducing out-migration Reduce instances of petty crime and vandalism 	<ul style="list-style-type: none"> Will it promote and encourage community involvement and participation Will it stem the declining population by reducing out-migration Will it reduce instances of petty crime and vandalism Will it improve the mix of dwelling sizes and tenures? Will it improve the supply of affordable housing? Will it address changes in future housing need? Will it reduce poverty and social exclusion in those areas most affected? Will it reduce the number of households in fuel poverty? Will it increase opportunities for consultation? Will it improve access for the disabled? Will it improve accessibility to health, education, shopping and leisure? Will it enhance community and public transport? 	Community Health, Equality and Education & Economy and Employment

12.2 What will the situation be with the Masterplan?

The 2013 Strategic Housing Market Assessment (SHMA) identified a need to increase the number and range of houses to reflect underlying aspirations and to prevent out migration, much of which is due to a lack of appropriate housing choice within the city. The SHMA identified a particular need for more executive housing and larger family dwellings: 3, 4 and 5+ bedroom houses in the SSGA would go some way to accommodating the need for this within the city.

The SSGA can accommodate c. 3000 houses, has the potential to meet 20% of the city’s housing need and, in particular, provide significant numbers of much needed executive and larger family homes. The SPD proposes that all development would consist of a mix of housing types and tenures including executive, affordable, and provision of an ‘Extra Care’ facility which will serve as a ‘hub’ of the community. The mix of housing as identified in the SHMA, if provided in the SSGA could result in a positive reduction in out-migration.

The SPD proposes that new development is built to a high sustainability standard, and cites the use of responsibly sourced building materials. However to maximise the sustainability credentials of the buildings within the SSGA and tackle potential issues of fuel poverty, the SPD could include requirements incorporating measures to ensure the thermal efficiency/comfort standards are high – For example by ensuring that all developments meet at least BREEAM Excellent construction standards, which is awarded for all sustainable technologies. The proposed District Heating scheme within the SSGA could result in an

energy cost saving for residents, which would also have positive implications for fuel poverty minimisation.

The Masterplan has at its core the intention to create an area that will provide opportunities to enjoy the SSGA by creating well connected and improved internal greenspace to create the feeling of a single unified recreational offering.

Primarily, the SPD ensures the recreation needs of the local residents are to be met through the provision of a high degree of amenity green space, access to sports fields, and through the overall intent that the community will be easily navigated through active travel.

The Masterplan aims to transform the greenspace of the SSGA into a functional community resource for leisure. For example, the GI in the SSGA will link and maintain the integrity of current protected areas such as Blakeney Woods LWS, with other woodland in the south of the site and also to an area of allotments for community use.

The Masterplan acknowledges the link between active travel and the health of its residents. By incorporating quality design and place-making that puts pedestrians and elements of the natural environment at the top, the Masterplan can create appealing, prosperous and sustainable environments that improve health and well-being, economic activity, civic pride and a sense of community.

In particular, providing access to a well-lit, safe and pleasant walking/jogging/cycle routes through the SSGA, the SPD can go some way to addressing widespread health concerns including obesity, heart disease and other associated conditions linked to a lack of exercise. Specifically, by designing safe routes to the primary school/local centre for parents and children, active travel can be encouraged from an early age.

The Masterplan will have the net effect of attracting greater use of SSGA and will provide more opportunities for healthy activity through the use of new and connecting recreational paths. It is therefore reasonable to assume that the Masterplan will contribute to improving health. Further discussion of the sustainable transport provisions made in the SPD can be found under SA Objective 12 (Section 15).

The Masterplan illustrates consideration of community services and facilities within the SSGA; accessibility to services is an important factor in encouraging more healthy modes of travel and also helps encourage community participation. The SPD incorporates a number of proposals to locate community centres, local shops, sports pitches, an extra care facility, and a primary school within the SSGA itself.

Development within the SSGA will stimulate an inevitable population increase within the area, and subsequently increase transport demands. Given that bus services are not as frequent as central areas of the city and the fact that the SPD includes provision for access by private vehicles, it is reasonable to consider that the Masterplan will increase car travel and have potential to increase congestion, limiting accessibility in some aspects.

Provision of bus services from the outset of development will be a key determinant of the sustainability of the proposals and the SPD acknowledges that agreements with developers will provide an important means of achieving this.

With regard to Health Services provision, the Masterplan identifies that existing GP practices are located in nearby Ryhope, Silksworth and Doxford however these are not considered to be in walking distance of the SSGA. This could be considered a negative impact on access to health.

There are primary schools located in the surrounding area, however these do not have capacity to meet the demand likely to be created as a consequence of the SSGA. Therefore, in the short-medium term as the needs of the new community increase there is likely to be a

shortage of educational provision. The SPD does not seek to allocate additional educational provision in the short term, however the supporting text of the SPD states that there will be an extension of 2 existing primary schools, in close proximity to SSGA, to meet the short term needs of the new community.

The SPD seeks to allocate additional educational provision within the Local Centre (LC) at Land north of Burden Lane (LNBL) in the form of a Primary School including a nursery/day care in the medium-long term. It supports the consolidation of local educational provision to meet anticipated demand linked to housing growth in the surrounding areas. In addition, the educational provision is in close proximity to travel routes, MUGAs and open space which may allow functional access to the environment for educational purposes. Further information on issues of education associated with the Masterplan, can be seen under SA Objective 9 (Section 12).

The Masterplan will generate new business opportunities creating a local economy within the plan area and will also lead to the creation of a number of additional jobs directly through the provision of retail and leisure facilities. Increasing visitors will also provide support and custom for existing business in the surrounding area and subsequently there may be an increase in local secondary employment.

Longer term population growth coupled with further business opportunities could lead to an upward spiral of success which could help Sunderland become regional centre in the North East which can help to provide an increase to the regional economy, expenditure and job creation, which will in turn create the requirement for a local workforce. Additional information relating to the economic impact of the SPD proposals can be found within the discussion of SA Objectives 10 and 11.

In addition through promoting accessibility the SPD will also have the potential to further encourage visitors to the SSGA, as well as help encourage prospective employers and businesses to locate in the town. This will stimulate the local job market providing local employment opportunities for the residents and the wider Sunderland population.

Crime and the fear of crime are important components of a sustainable community. Locally identified anti-social behaviour in the SSGA include issues such as noisy neighbours, drugs, alcohol, graffiti, vandalism and other deliberate damage to property or vehicles. Individual design measures have been proposed as part of the SPD that aim to foster a sense of community and reduce the fear of and incidence of crime.

Furthermore, the SPD intends that Building for Life 12 development standards should be adhered to in taking the Masterplan proposals forward. This steers the planning of new development through urban design standards which aim to create safe environments for new communities and drives development proposals should seek to achieve building for life accreditation, therefore providing a mark of a good place to live.

The proposed green infrastructure for the SSGA could prove to be a key area in regards to fostering a sense of ownership and community; conversely these areas can often become the focal point of anti-social behaviour. The SPD recognises this and has outlined as a driving principle, that natural heritage in the SSGA should aim 'to avoid creating areas with a lack of ownership and natural surveillance that result in unclaimed spaces that attract anti-social behaviour'. The issue of surveillance is touched upon on numerous occasions in the SPD and is primarily an issue that should be considered at the design stage to mitigate the negative impacts of anti-social behaviour and crime.

12.3 How can we mitigate / enhance effects?

The text of the SPD could be enhanced to make it clear that the SSGA must be able to perform functions for all members of the community. This is the assumed intent within the development but this could be mentioned specifically within the supporting text of the SPD.

Furthermore, the enhancements could be made by utilising designs that go beyond the minimum standards of accessibility as set out in the Disability Discrimination Acts 1995 and 2005.

Site specific survey work and assessments will have to be undertaken to fully judge the impact on accessibility, community involvement, and health in the SSGA. For example an Open Space, Landscape and Recreation Strategy would allow for full enhancement of the greenspace provisions in the SPD and allow for consideration of additional facilities for recreation in the SSGA. For instance, added features such as outdoor gym equipment to further enhance community participation.

Additionally the proposals in the HRA suggested the appointment of a coastal ranger/dog warden. This individual would act to raise awareness of key issues and provide a support programme in the local and wider community, encouraging community participation. The production of a Statement of Community Involvement in support of any proposals could enhance the positive impact on participation.

Connectivity for walkers and cyclists should be maximised between focal points within the development area such as schools, employment and leisure facilities. Linking routes to green infrastructure will similarly act as motivation to walk over travelling by car and have beneficial health impacts. Creating traffic-free links would be the most beneficial in promoting active travel within the SSGA.

The proposals for public transport could be further enhanced by considered siting of bus stops to ensure equal access for all residents. Similarly a frequent service would represent the most attractive proposition for commuters within the SSGA. During times when travel to and from the area is highest additional public transport services may be needed, although it is the responsibility of the bus service provider to respond with increased services.

12.4 Conclusions

The Masterplan clearly intends to create a high quality environment for use by the local community and to some extent, visitors from further afield. Furthermore it includes executive, affordable and sustainable housing provision to meet the demands set out in the SHMA. Strong community ownership and extensive use of the area, especially during the evening, may help to increase natural surveillance and thus decrease potential incidents of crime which in turn has benefits for well-being and a sustainable community. Proposals contained within the Masterplan support the provision of community and public transport, internally through the provision of an integrated community with a host of services, encouraging active travel and allowing good accessibility within the SSGA.

Table 12.2: SA Objective 8 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	The Masterplan will create an area that will enable community and residential activities to be undertaken within a high quality environment with increased legibility and patterns of use. This will provide opportunities for strengthening the local community and will enhance the local environment. Negative impacts include some accessibility issue for health and education access. These should be mitigated by improved public transport to the area.	The SSGA can play an important part in delivering sustainable communities by providing open space and recreational opportunities to compliment regeneration around the city including the housing growth associated with Sunderland Arc sites.

Long term	In the long term there is the potential for new community activities and events to become established and stronger access links developed. It is likely that in the long term the SSGA will become established as a desirable place to live.	The SSGA will create important leisure and open space that will support the growth proposals within Sunderland Arc sites and Local Development Framework that will contribute towards creating more sustainable communities.
Areas likely to be significantly affected	The SSGA communities may see the most benefit on a day to day basis but the provision of a large number of high quality housing will benefits in achieving city wide demand.	
Permanent vs Temporary	Community wellbeing and sustainable communities can take a long time to create. Community wellbeing is at least partly related to community stability. The contribution of an improved landscape and community has the potential to be permanent	
Secondary	An improved environment and community asset could make the South Sunderland area more desirable to live within, which would support housing proposals within the Sunderland LDF. This will also attract a range of economic interest such as within the retail sector.	

13 ESTABLISH A STRONG LEARNING AND SKILLS BASE (SA OBJECTIVE 9)

13.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 13.1: SA Objective 9 - Locally Distinctive Sub-criteria and Guiding Criteria

SA (high objective)	Objective level	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Establish a strong learning and skills base		<ul style="list-style-type: none"> Maintain levels of educational attainment 	<ul style="list-style-type: none"> Will it maintain levels of educational attainment Will it increase the numbers of school-leavers achieving GCSE passes? Will it increase numbers undertaking further and higher education? Will it enhance opportunities for adult education? Will it encourage training opportunities for higher quality employment? 	Economy and Employment

13.2 What will the situation be with the Masterplan?

There are primary schools located in the surrounding area, however these do not have capacity to meet the demand likely to be created as a consequence of the SSGA. Therefore, in the short-medium term as the needs of the new community increase there is likely to be a shortage of educational provision. The SPD does not seek to allocate additional educational provision in the short term, however the supporting text / guiding principals of the SPD states that there will be an extension of 2 existing primary schools, in close proximity to SSGA, to meet the short term needs of the new community.

The SPD seeks to allocate additional educational provision within the Local Centre (LC) at Land north of Burden Lane (LNBL) in the form of a Primary School including a nursery/day care in the medium-long term. It supports the consolidation of local educational provision to meet anticipated demand linked to housing growth in the surrounding areas. In addition, the educational provision is in close proximity to travel routes, MUGAs and open space which may allow functional access to the environment for educational purposes.

The SPD includes opportunities for the creation of jobs. Although many of these may perhaps be low skilled job creation will enhance opportunities for people to develop. For example jobs within the evening economy can increase catering skills.

Whilst there are skills opportunities promoted within the Masterplan and supporting text of the SPD measuring the effects of these on the population is difficult. Whether it will make an impression on the overall level of achievement within Sunderland is difficult to determine.

No secondary provision has been provided within the Masterplan, however the supporting text states that there is some uncertainty as to the need for additional capacity and should the need arise in the future, the SPD and Infrastructure Delivery Study will be amend accordingly.

In terms of wider educational opportunities, the SPD promotes the provision of community facilities and the self-containment of the town. This will help increase opportunities for learning and skills development.

13.3 Conclusions

When assessing the contribution of the SPD to encouraging skills and education it must be considered that the educational attainment of the population will not be adversely affected if the proposals did not go ahead.

Table 13.2: SA Objective 9 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	The proposals are likely to have a negative impact on educational provision in the area if the short term needs of the new community are not met. The SPD should provide the opportunity to enhance the skills of the local population in the leisure and employment opportunities provided in the proposals.	The Sunderland Strategy supports the development of skills and increasing opportunities for education across Sunderland. It is considered that the schemes this may create can help to encourage increasing achievements alongside the proposals within the SPD.
Long term	As the SSGA becomes more established as community there will be more demand for a skilled workforce to facilitate the services industry in the area as it continues to grow.	Other schemes across the city should help to ensure that the educational and skills offering at the SSGA continue to be upgraded and provide an important function.
Areas likely to be significantly affected	There is the possibility that people adjacent to the SSGA and across the city may benefit from the opportunities provided.	
Permanent vs Temporary	It is considered that improvements to skills and education will be permanent for the individuals affected.	
Secondary	Improving education and skills can improve entrepreneurial activity and the attractiveness of an area for the creation of new employment opportunities and can help to boost the economy.	

14 STRENGTHEN THE REGIONAL ECONOMY (SA OBJECTIVE 10) & DEVELOP A MORE SUSTAINABLE EMPLOYMENT MARKET (SA OBJECTIVE 11)

14.1 Introduction

SA Objectives 10 (Strengthen the Regional Economy) and 11 (Develop a more Sustainable Employment Market) have been summarised together as both relate to economy, employment and enterprise and therefore the potential effects of the SPD are similar in nature.

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 14.1: SA Objectives 10&11 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high objective)	Objective level	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Strengthen the regional economy		<ul style="list-style-type: none"> Strengthen the local economy by encouraging local businesses to locate to the area Build the local tourist economy by attracting more visitors to the seafront 	<ul style="list-style-type: none"> Average weekly income of residents Number of visitors to the area Number of new businesses established 	Economy and Employment
Develop a more sustainable employment market		<ul style="list-style-type: none"> Establish a more diverse local economy 	<ul style="list-style-type: none"> 	Economy and Employment

14.2 What will the situation be with the Masterplan?

Key issues in Sunderland that the plan seeks to address are: the need to reduce out-migration; increasing the self-sufficiency of the town; improving the mix of jobs; and reinforcing the role of Sunderland as a service centre. In this regard, the proposals for development at the SSGA are considered likely to provide a significant localised boost to the local economy. However, as the level of development increases, the demand on key services would also increase, especially in the short term. Therefore there is the potential for negative effects on this objective as a result of the delivery of the Masterplan.

Retail provision is another consideration to support the economic self-sufficiency of the area and to reduce the outflow of economic activity to nearby competing centres. The Masterplan proposals include several commercial opportunities. This will include a Local Centre (retail and school) and Extra Care (hospice) allocations at Land North of Burden Lane and Cherry Knowles respectively. This has the potential to improve local offer in the area and strengthen its role as a service centre and provide employment opportunities in those developments adjacent to the SSGA. An increase in employment provision in the SSGA will also promote its vitality and viability through supporting local shops and services.

The housing allocations proposed through the plan will support the strength and capability of the local and regional economy. This will be reinforced by the focus on supporting shops and services and on supporting community provision. The provision of housing will not only stimulate the housing market but will also attract growth into the area owing to the increasing local population thereby supporting both existing and potential local business.

It is not thought that any of the sites that are proposed for housing use might alternatively be used / suitable for significant employment uses, although it is recognised that a number of the sites comprise productive agricultural land, Grade 3 (Good to Moderate) Classification.

The vitality of the SSGA will also be supported by the SPD’s focus on improving transport options, which seek to ensure that there is sufficient access to housing, employment and services by a range of transport modes.

In terms of tourism and the visitor economy, the SPD will seek to improve visitor offerings. This has the potential to benefit the local economy through encouraging increased visitor spend and increasing the profile of the area. This will be supported by improvements the appearance of the area, as the quality of place can serve as a major asset with regards the competitiveness of a region which will stimulate the economy of Sunderland as a whole.

In addition through promoting accessibility the SPD will also have the potential to further encourage visitors to the SSGA, as well as help encourage prospective employers and businesses to locate in the town. This will stimulate the local job market providing local employment opportunities for the residents and the wider Sunderland population.

14.3 How can we mitigate / enhance effects?

The attractiveness of this destination for visitors is dependent not only on the proposals themselves but also how these proposals fit in with local business, employment and housing policies within the LDF Core Strategy. It is important that local businesses not only complements the Masterplan proposals but also serves the existing communities surrounding the SSGA. The opportunity of strengthening these proposals through examining the Local Development Framework should be explored. In addition, new business opportunities will serve not only those frequenting the SSGA but also residents.

By incorporating quality design and place-making that puts pedestrians and elements of the natural environment at the top, the SPD can create appealing, prosperous and sustainable environments that improve health and well-being, economic activity, civic pride and a sense of community.

14.4 Conclusions

There will be both indirect and direct benefits from these proposals on local economy and employment which will be realised both in the short and the long term. In addition the SSGA Masterplan will provide new opportunities for economic activity and will encourage visitors. This will provide an extra economic boost for existing businesses.

Table 14.2: SA Objectives 10&11 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	The Masterplan will generate new business opportunities creating a local economy within the plan area and will also lead to the creation of a number of additional jobs directly through the provision of retail and leisure facilities. Increasing visitors will also provide support and custom for existing business in the surrounding area and subsequently there may be an increase in local secondary employment.	The Sunderland Economic Masterplan (2010) guides Sunderland’s economic growth over the next 15yrs and supports proposals that will prevent out migration of young professional and student populations, and meet the needs of new populations.
Long term	Longer term population growth coupled with further business opportunities could lead to an upward spiral of success which could help Sunderland become regional centre in the North East which can help to provide an increase to the regional economy, expenditure and job creation, which will in turn create the requirement for a local workforce.	Short term success coupled with similar projects in the locality will help to improve the profile of the SSGA within the region and as a result could provide a healthy economy and jobs within this and within associated business.

<p>Areas likely to be significantly affected</p>	<p>At a local level the SSGA and surrounding areas will benefit from an increase in custom at local businesses. In addition the proposals will create a more sustainable employment market and could help Sunderland to achieve employment levels promoted within the Regional Economic Strategy.</p>
<p>Permanent vs Temporary</p>	<p>Economic growth is by definition temporary and employment opportunities are tied to the economy's success. Many of the employment opportunities that will result from Masterplan will be temporary. However the conditions needed to stimulate such growth have much more permanent effects: for instance good infrastructure, good balance of housing to employment, and good accessibility to jobs.</p>
<p>Secondary</p>	<p>Economic and employment growth is likely to have positive impacts on human health and community wellbeing. Generally speaking, economic growth can also lead to negative impacts on air and water quality, water resources, and biodiversity. The local employment market will also be affected by jobs resulting from the wages of people in direct and indirect employment as a result of the SSGA.</p>

15 DEVELOP SUSTAINABLE TRANSPORT AND COMMUNICATION (SA OBJECTIVE 12)

15.1 Introduction

The Scoping Report introduces the following locally distinctive criteria that will be considered in order to inform the assessment of the Masterplan against this SA Objective, along with guiding criteria, however it is noted that the list is not prescriptive.

Table 15.1: SA Objective 12 - Locally Distinctive Sub-criteria and Guiding Criteria

SA Objective (high level objective)	Locally Distinctive Sub Criteria	Guiding Criteria	Topic Area
Develop sustainable transport and communication	<ul style="list-style-type: none"> • Reduce the reliance on the private car as a preferred mode of transport • Reduce congestion • Improved infrastructure • Improve public transport links between South Sunderland and key services in the city • Improve pedestrian and cycle routes to promote healthy modes of transport 	<ul style="list-style-type: none"> • Number of cycle trips • Patronage of public transport • Levels of car ownership and road users • Accessibility rankings 	Transportation

15.2 What will the situation be with the Masterplan?

Development within the SSGA will stimulate an inevitable population increase within the area, and subsequently increase transport demands. Given that bus services are not as frequent as central areas of the city and the fact that the SPD includes provision for access by private vehicles, it is reasonable to consider that the Masterplan will increase car travel and have potential to increase congestion.

The SPD illustrates vehicular access to the area will supported by new parking provision, and that overall the SSGA will be well connected to surrounding road networks. For example the Southern Radial Route (A1018) will provide a direct route between Ryhope and Sunderland City Centre. Strong connectivity is important in meeting certain social objectives however this coupled with the heavy reliance on private vehicles both locally and within the greater Sunderland area will mean that there will be an increase in traffic associated with the proposals.

However, the SPD seeks to promote and facilitate the development of new and improved sustainable transport networks in the area including pedestrian, cycle and public transport links that connect directly with all important destinations within the development and beyond. Improvements to the SSGA’s green infrastructure networks will also promote walking and cycling in the area.

The Masterplan provides pedestrian and other multi-user routes along a number of designated routes free from traffic both within and through the site, such as immediate access to the Walney to Wear (W2W) and National Cycle Network, and by extension, links to wider recreational networks.

The proposals are enhanced by the provision of facilities for cyclists such as secure cycle parking and storage areas both adjoined to housing and within key public spaces. This includes at the points of entry into parks, as well as at the local centre and the school. The provision of these local retail and community facilities throughout the SSGA should also act to promote active travel over use of the private car. Additionally, specific design guidance is proposed in the SPD to encourage the delivery of movement and street proposals that

encourage a layout for the SSGA that should make walking and cycling to local facilities the natural option, providing a network of interconnected pedestrian and cycle routes.

Furthermore, at the detailed design stage the allocation of specific lanes within the site for cycling provide legibility and permit a safe and hazard free experience for the cycle routes. This will encourage more people to use this area for recreation and short range transportation and dissuade long vehicle journeys to areas afield.

Demand for public transport services will also increase with increasing resident numbers. Provision of bus services from the outset of development will be a key determinant of the sustainability of the proposals and the SPD acknowledges that agreements with developers will provide an important means of achieving this. Public transport routes are proposed on Primary Streets within each subarea of the SSGA and direct pedestrian and cycle links to the bus service will be delivered through green routes.

To reduce the reliance on car-based travel the fullest range of alternative transport modes should be explored for the SSGA. While the Tyne and Wear Metro service does not extend to the SPD area presently, the potential for future development of stations that would serve the area has been recognised within the Masterplan.

In summary, the Masterplan will result in a large volume of permanent new users journeying to and from the site, throughout the year. It is likely that this may lead to a significant number of new car journeys, especially from commuters travelling to Sunderland City Centre, and could exacerbate congestion issues. However, there is potential for better bus services and modal shift to mitigate these effects.

15.3 How can we mitigate / enhance effects?

The main opportunities for mitigating the effects of increased private car use lie in the promotion of active and public modes of transport, however the use of electric vehicles presents a highly sustainable alternative to conventional motor vehicles, to encourage their use within the SSGA, adequate charging facilities should be encouraged through ensuring new dwellings and non-residential developments are adequately equipped to charge electric vehicles.

The proposals relating to pedestrian and bicycle use could be further enhanced by safeguarding existing traffic-free thoroughfares, for example maintaining Nettles Lane as a traffic-free north-south route through the SSGA for recreational users.

Furthermore, ensuring that walking and cycle routes through the new development connect with currently used routes, and with adjacent urban areas will maximise active travel as the most attractive travel option for journeys. This will apply especially between the SSGA and Doxford and Ryhope centres.

Connectivity for walkers and cyclists should be maximised between focal points within the development area such as schools, employment and leisure facilities. Linking routes to green infrastructure will similarly act as motivation to walk over travelling by car. Creating traffic-free links would be the most beneficial in promoting active travel within the SSGA. Furthermore, the SPD pointed to the narrow yet heavily trafficked nature of Burdon Lane, which presented limited usability for cyclists and walkers. The overall connectivity for pedestrians and cyclists aspired to in the SPD could be enhanced further by exploring the potential of utilising this route as one that is car-free.

Detailed site-level Transport Assessments and Travel Plans should be prepared to identify more specific issues associated with proposed development, including the effects on local and strategic highway network and neighbouring local authority roads and any solutions for upgrading infrastructure as required. A Travel Plan would demonstrate how sustainable travel patterns will be actively encouraged and achieved through the development proposal.

The proposals for public transport could be further enhanced by considered siting of bus stops to ensure equal access for all residents. Similarly a frequent service would represent the most attractive proposition for commuters within the SSGA. During times when travel to and from the area is highest additional public transport services may be needed, although it is the responsibility of the bus service provider to respond with increased services.

The SPD should also seek to limit the provision of additional parking in the area to dissuade people from using private transport where possible. Provided there are sufficient and efficient public transport services, this will not detract from the proposals.

15.4 Conclusions

The development of the SSGA will result in a large volume of permanent new users journeying to and from the site, throughout the year. It is likely that this may lead to a significant number of new car journeys, and could exacerbate congestion issues. However, there is potential here to develop a community that is well connected to the surrounding area and facilities by road, footpath, cycle route and public transport link. The development of a wide range of connection options, have the potential to influence modal shift away from private vehicles and to mitigate the negative effects.

Table 15.2: SA Objective 12 – Conclusions of impacts

Type of Impact	Sunderland Growth Area Masterplan SPD	SPD plus other plans, programmes etc.
Short/medium term	Development in the SSGA will result in an increase in population in an area that is largely arable in nature at present. The presence of a new community here will likely result in an increase to the number of trips by private vehicle and increase congestion pressure both along routes to the city centre and routes to the coast. This is considered an adverse effect. However, this will be offset by the enhanced provisions for pedestrians and cyclists and the proposed bus route.	When viewed alongside the Rushford and Silksworth Lane residential developments (together adding another c.400 houses), the 140 bed Ryhope General Hospital and the Extra Care Doxford Park Estate, there is likely to be a cumulative increase in demand on transport infrastructure in the locality of the SSGA . Some of these residents and visitors will make use of the existing sustainable transport routes and it is reasonable to consider additional demand for travel by private car.
Long term	As the development SSGA continues over the 20 year timeframe discussed in the SPD, population in the area will reach its peak. It is reasonable to consider that the net effect may be for increasing use of private vehicles that could add to existing congestion issues. However, agreements with developers are supported through the proposals to enhance the local public transport provision. Possible expansion of the metro route will also contribute to the modal mix of transport alternatives to the private car and facilitate a shift.	Warmer summers as a result of climate change alongside increasing population growth and potential for improvements to the seafront will increase visitor numbers generally. Increasing traffic and congestion may result. This will, however, be offset by increasing provision of public transport not only to the SSGA but also all along the seafront.
Areas likely to be significantly affected	Increased amounts of traffic and transport will be most felt in areas with existing traffic issues such as the A19. As new public transport services are introduced the accessibility of the SSGA population and those along new or improved routes will increase.	
Permanent vs Temporary	With an increase in resident numbers, a permanent provision of public transport services should result.	
Secondary	The increase in private vehicles may have adverse effects on congestion, air quality and thus public and ecological health. This will also be weighed against the health benefits of the promotion of walking, cycling and healthy recreation.	

16 CONCLUSIONS AT THIS STAGE

16.1 Introduction

Taking each sustainability topic in turn, it is possible to draw the following conclusions.

In identifying impacts, the following key is used throughout this chapter:

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 SPD
Negative effect
Significant negative effect

16.2 Likely impacts of the Masterplan

Positive, Negative and Cumulative impacts

Each of the SA Objective chapters has set a narrative ‘story’ of the impacts of the emerging South Sunderland Masterplan SPD. This includes the current status, the likely situation in the future without the SPD and the situation under the SPD. Table 16.1 summarises these effects using the colour coding above reflecting on the content of the preceding chapters.

Cumulative impacts are impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with South Sunderland Masterplan. Synergistic impacts are when a total effect is greater than the sum of the individual effects.

Table 16.1: Summary of impacts

Objective	Situation with the SPD	SPD plus other plans and strategies
Safeguard and enhance the region’s environmental infrastructure	Neutral impact, or rough balance of positive and negative effects	Positive impact
Secure safe waste recovery / disposal without endangering health or harming the environment	Neutral impact, or rough balance of positive and negative effects	Neutral impact, or rough balance of positive and negative effects
Protect water sources from contamination and minimise the release of harmful products into the environment	Positive impact	Positive impact
Minimise polluting activities and contain air pollution to within acceptable limits	Positive impact	Positive impact
Adapt to and mitigate for climate change.	Significant positive impact	Significant positive impact
Promote, enhance and respect the region’s culture and heritage	Significant positive impact	Significant positive impact
Improve health and well-being while reducing inequalities in health	Significant positive impact	Significant positive impact
Build sustainable communities	Significant positive impact	Significant positive impact
Establish a strong learning and skills base	Neutral impact, or rough balance of positive and negative effects	Positive impact
Strengthen the regional economy	Significant positive impact	Significant positive impact
Develop a more sustainable employment market	Significant positive impact	Significant positive impact
Develop sustainable transport and communication	Neutral impact, or rough balance of positive and negative effects	Positive impact

The table reveals that with other plans and strategies there are strong social and economic benefits for an increasing population from the South Sunderland masterplan proposals but potential adverse effects from increasing visitor pressure on the local coastal and marine environments.

The Masterplan seeks to improve the environment of the SSGA whilst promoting social benefits with associated economic benefits. **Table 16.1** suggests that the Draft South Sunderland Masterplan would lead to:

- **Community benefits** by encouraging increasing recreational use of the area for a wide range of activities and for a wide range of the community. Furthermore, it will provide a source of desirable new homes with a mix of tenure. The proposals will have benefits for the health and wellbeing of the population and add to the sustainability of South Sunderland’s community.
- **Economic benefits** from retention of populations to the area retaining spend and input into the economy, opportunities for new local centres and small areas of business, and wider benefits of tourism related services as populations use local facilities.
- **Environmental benefits** from improving the landscaping, greenspaces, creations of SAANGs and improved public realm and also through the promotion of means to mitigate and adapt to climate change.
- Potential **environmental costs** from the negative effects of increasing population numbers in the South Sunderland area, and visitor numbers to the coast. These will include the costs associated with increased visitors to the area and therefore car usage, removal of established inland greenspace and an increasing population located adjacent to the coast which could result in pressures on coastal infrastructure leading to contamination of the coastal zone.

Secondary impacts and the interrelationships between the impacts

Secondary impacts can be identified as those impacts that are not a direct result of the plan, but occur as a result of this. There are a number of linkages and themes running through the assessment. **Table 16.2** shows the major interrelationships identified in the assessment.

Table 16.2: Secondary impacts

Impact of the SPD	Secondary Effects
An increase in population numbers	Education of the environmental and historical features of the locale
	Stimulation of the local economy
	Increase in waste generation
	Increase in vehicle congestion
Greater access to local biodiversity designations	Impacts on water quality
	Increase in awareness of local biodiversity
	Pressure on conservation efforts in the region
	Greater noise and visual disturbance to local wildlife
Increase vehicular usage and congestion	Greater likelihood of pollution and waste to impact upon local wildlife
	Worsening air quality
	Increase bicycle usage
Increase in waste generation	More impetus to provide increased public transport
	Increase in general population in South Sunderland, and new

	businesses.
	Increase in visitor numbers
Enhancement of landscape	Increase in populations in the South Sunderland Area, improved public realm, creations of SAANGs, and useable greenspaces. Enhances attractiveness and use of local greenspaces.
Stimulation of the local economy	Increase in local employment Increase in retail and social facilities for the local residents Increased attractiveness at a regional and national level
Space for recreation	Better community health and wellbeing
Education	Increase in awareness of Sunderland's local heritage and environment.

Short, medium, long-term, permanent and temporary effects

Some of the key short, medium and long-term, permanent and temporary impacts of South Sunderland Masterplan and SPD include:

- **Short-term (<5 years):** Provision of housing will augment the local full time population of South Sunderland. Immediate benefits to improving the landscape and environment of South Sunderland that should increase the number of visitors to the area, particularly during the summer. Potential for impacts on local wildlife from disturbance from an increasing number of visitors and disturbance of inland green space functional to the interests of this wildlife.
- **Medium-term (5-15 years):** The local economy should start to show beneficial changes and will start to grow. The area may become more desirable for the local population and may increase the desirability of the local area particularly within the masterplan area itself as attractive accommodation is built. Traffic will have increased owing to the attractiveness of the area as a place to stay and the nearby coast as a destination and ample parking provided and will require investment in better public transport to mitigate for adverse effects. Maintenance of services and facilities provided will be needed to mitigate for sources of waste and pollution that are likely as a result of new development.
- **Long-term (15+ years):** A new settlement area with a mix of housing types will be established. This along with the provision of greenspaces, and networks should result in a high quality living environment for its residents. Improved public transport links and encouragement for other forms of traffic should assist in the mitigation of the impact on climate change, noise and air caused by increased population. Landscape improvements and areas of biodiversity should be more established and developed, and offer potential to link into the wider area. Monitoring should continue on aspects such as waste, recycling, transport uses and movement to assist in learning how to manage increase in growth and work with the environment.

Further recommendations

In addition to the recommendations included in each impact chapter we recommend that South Sunderland masterplan SPD must be considered as an integral part of Sunderland's Local Development Framework. The proposals within the SPD should be supported and enhance the policy and allocations that the LDF will contain.

17 WHAT ARE THE NEXT STEPS (INCLUDING MONITORING)?

17.1 Proposals for monitoring

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.

The ‘Environmental Report’ required under the SEA Directive should include:

“a description of the measures envisaged concerning monitoring in accordance with Article 10”

Annex 1(i)

“Member States shall monitor the significant environmental effects of the implementation of plans and programmes...” (Article 10(1))

17.2 Monitoring South Sunderland Masterplan SPD

Table 17.1 summarises out the recommendations alongside suggestions for monitoring, and potential monitoring indicators. It will be up to the Council to consider the practicalities of monitoring and what might be achievable. Monitoring should be undertaken through the Annual Monitoring Report for the Councils Local Development Framework.

Table 17.1: Monitoring suggestions

Significant Effect	Monitoring suggestion	Potential Indicators
Uncertainty exists as to the impacts of the SPD on wildlife within the local environmental designations (The significance of this effect may be influenced by further work on the HRA).	Natural England closely monitors all SSSIs. Some of the local environmental designations are all encompassed within Durham Coast SSSI which is in particularly monitoring for its role in supporting purple sandpiper.	<ul style="list-style-type: none"> • Status of biodiversity prior to activities commencing. • Water quality and wildlife status to remain the same or improve as a consequence of the activities. • Visitor numbers to the area • Number of sites where maintenance regimes have altered to benefit biodiversity • Number of trees / woodland / shrubs planted annually Sunderland Council • Change in areas of biodiversity importance

Significant Effect	Monitoring suggestion	Potential Indicators
<p>Decreases in local air quality as a result of increase vehicle use and congestion associated with the proposals</p>	<p>The Local Development Framework Annual Monitoring Report monitors specific “hotspot” areas of Sunderland for air quality. There is no specific monitoring station at South Sunderland and is not currently identified as a “hotspot”, or problem area. Monitoring of traffic numbers overtime, may assist in indicating if comparable to other “hotspot”, the numbers are likely to cause problems.</p>	<ul style="list-style-type: none"> • 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
<p>Increases in waste generation associated with the increased visitor numbers.</p>	<p>Waste is monitored at a city wide level by Sunderland City Council and it is difficult to isolate waste generation in small areas. Waste disposal will continue to be part of the Councils responsibilities and localised monitoring may be undertaken by other Council services.</p>	<ul style="list-style-type: none"> • Amount of waste recycled / diverted from landfill • Amount of council compost made per annum

APPENDIX 1 – SCOPING CONSULTATION RESPONSES

Consultee	Scoping Response	Comments
<p>Environment Agency (EA)</p>	<p>Climate Change</p> <ul style="list-style-type: none"> Climate change will present significant challenges to the people and environment of Sunderland. We therefore suggest you consider this issue as part of the evidence base for the SA, as a key sustainability issue and as an SA objective against which your plan will be appraised. This should help ensure your Local Plan adequately address current and future climate change risks. We support the objective to Adapt to and mitigate against climate change within the SA framework. In England, new homes are intended to be ‘zero carbon’ by 2016, therefore further to the current sub criteria we would suggest the addition of following points ‘Support the delivery of sustainable buildings’ and ‘Ensure that a significant proportion of the energy supply of substantial new development is gained on-site and from a renewable source and/or from a decentralised, renewable or low-carbon, source ‘ Strategic Environmental Assessment and Climate Change: Guidance for Practitioners produced in August 2011 provides guidance, for plan makers such as yourselves, on how climate change issues can be considered in the SEA and SA of plans. <p>Flood Risk</p> <ul style="list-style-type: none"> South Sunderland is within flood zone 1 with the lowest probability of flooding from rivers and the sea, where the chance of flooding in any one year is less than 0.1%. We would expect the SA to include flood risk in the baseline information, as a key sustainability issue and as an objective. The SFRA identifies parts of South Sunderland as within a critical drainage area. Your Strategic Flood Risk Assessment should form part of the evidence base. Within the SA Framework Locally Distinctive Sub Criteria, we advise that the following criteria ‘Ensure surface water run-off is managed in a sustainable manner’ be amended to the following to incorporate flood risk ‘Ensure surface water run-off is managed in a sustainable manner, to reduce flood risk whilst improving water quality’. <p>Water Framework Directive</p> <ul style="list-style-type: none"> The Water Framework Directive (WFD) is European legislation designed to protect and enhance the quality of our rivers, lakes, streams, groundwater, estuaries and coastal waters, with a particular focus on ecology. The Environment Agency is the lead authority on the WFD in England and Wales. We have prepared the Northumbria River Basin Management Plan which includes actions to improve the water environment for waterbodies within your local authority. However, the legislation also sets a general legal duty on all public bodies (including Local Authorities), in exercising their functions, to 	<p>The issue of climate change has been considered as part of the sustainability baseline (Section 2.4), as a key issue (Section 2.6) and SA objective (Section 2.6) against which the South Sunderland Masterplan (previously named SSGA) has been assessed.</p> <p>Noted, the suggested sub criteria have been added to those already detailed under the SA Objective ‘Adapt to and mitigate against climate change’.</p> <p>Noted, guidance documents have been considered as part of this SA.</p> <p>The issue of flood risk has been considered as part of the sustainability baseline (Section 2.4), as a key issue (Section 2.6) and SA objectives (Section 2.6) against which the South Sunderland Masterplan (previously named SSGA) has been assessed.</p> <p>Noted, the suggested amendment to the sub criteria detailed under the SA Objective ‘Live within our environmental limits: Protect water sources from contamination and minimise the release of harmful products into the environment’ has been undertaken.’</p> <p>Noted. Reference to the WFD and to the EA Northumbria River Basin Management Plan within the sustainability baseline (Section 2.4) of this SA. The consideration of the WFD requirements and the recommendations of the EA Northumbria River Basin Management Plan has been included as a Locally Distinctive Sub Criteria under the SA Objective ‘Protect Water</p>

Consultee	Scoping Response	Comments
	<p>have regard to River Basin Management Plans. You should therefore consider the requirements of the WFD and recommendations from the Northumbria River Basin Management Plan in your SA, as an SA objective against which your plan will be appraised and as part of your baseline.</p> <ul style="list-style-type: none"> This topic is particularly relevant to South Sunderland because urban and agricultural diffuse pollution are an issue and measures to address this in line with WFD outcomes should be a consideration. <p>Biodiversity</p> <ul style="list-style-type: none"> Green Infrastructure delivers biodiversity benefits and climate change adaptation. Open spaces can serve as flood storage areas if they are located in areas of high risk of flooding or functional floodplain. Green spaces and buffer zones can provide amenity benefits, biological enhancements, sustainable drainage and reduction in surface/storm water flooding. Green roofs can also be a valuable amenity space. We support that the protection and enhancement of biodiversity is considered as a key sustainability issue, and would suggest that habitats and species are mapped as part of the evidence base and biodiversity issues are addressed as an SA objective. <p>Contaminated Land</p> <ul style="list-style-type: none"> The whole of the South Sunderland site is defined as being a sensitive location for groundwater because it is located within source protection zones 1, 2 and 3 and is located over a principle aquifer. We suggest you include this information as part of the baseline for your SA to ensure that the potential impacts of your Local Plan policies and site allocations on groundwater can be identified and addressed. <p>Waste</p> <ul style="list-style-type: none"> When developing policies on waste we emphasise the importance of the 'Waste Hierarchy' as set out in Article 4 of the revised EU Waste Framework Directive to maximise the reduction and re-use of waste. 	<p>Sources from Contamination and Minimise the Release of Harmful Products into the Environment.</p> <p>Pollution is considered within the sustainability baseline (Section 2.4) and within the assessment of SA objective 'Protect water sources from contamination and minimise the release of harmful products into the environment' has been undertaken'.</p> <p>Noted. The biodiversity baseline considers biodiversity designations (Figure 2.1 – Section 2.4). The mapping of individual habitats and species have not been mapped and will be considered as part of any future planning applications / Environmental Impact Assessments brought forward by the South Sunderland Masterplan. In addition, biodiversity issues are addressed within the Objective 1 of the SA assessment.</p> <p>Noted, the evidence base for groundwater has been considered in the baseline (Section 2.4). This has been updated to include information regarding the Protection Zones (1,2,3) and the principal aquifer.</p> <p>Noted.</p>
English Heritage	<ul style="list-style-type: none"> Section 7.3.2 deals with the extent to which the plan proposals relate to the heritage of the study area and 	<p>Noted, the baseline section (Section 2.4) includes a list of the Scheduled</p>

Consultee	Scoping Response	Comments
(EH)	<p>its immediate environs. Baseline information, set out in Table 7.1, covers, only in the broadest of terms, the heritage assets within the local authority's entire administrative purview. This is, in my opinion, only of very limited value. The baseline would be more informative were it to identify all heritage asset types within the study area, together with those outwith that may otherwise be impacted upon by on-site developments or attendant off-site implications, such as transport provision. This baseline should also include non-designated, locally important, heritage assets.</p> <ul style="list-style-type: none"> Besides a numerical snapshot of heritage assets in relation to the planned development, the evidence base should identify the extent to which, because of its condition and use, those assets may be at risk. Where heritage is at risk in these terms the sustainability challenge for the plan will be to bring about a situation whereby development will be able, through cross-finance, to remove that risk by effecting any necessary repairs, and securing appropriate use or re-use. Sustainability issues identified are confined to possible effects upon the setting of the Scheduled Monument (in respect of which harm to, or loss of, its significance should be 'wholly exceptional' (National Planning Policy Framework (NPPF) paragraph 132), and the possibility of development generally not being in keeping with its context. The emerging SPD appears to have identified what are referred to as 'landscape views', but it should be noted that identifying what might be significant about the setting of a heritage asset may be a quite separate and distinct issue. <p>I would opine that the overarching sustainability issue as regards the historic environment is as follows.</p> <ul style="list-style-type: none"> Paragraph 7 of the (NPPF) advises that there are three dimensions to sustainable development: social, economic, and environmental. The environmental role or objective is to 'contribute to protecting and enhancing our natural, built and historic environment'. Paragraph 8 advises that gains in each should be sought 'jointly and simultaneously'. Paragraph 126 of the NPPF informs us that heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance. The corollary is that development which does not do this will not be sustainable and might reasonably be expected to be resisted, whether it be in relation to plan-making or determining planning applications. So for the purposes of this sustainability appraisal it is important for the local planning authority to assess 	<p>Monuments and listed buildings in close proximity to the site.</p> <p>A search of Historic England PastScape, Durham and Northumberland Historic Environment Record (Keys to the Past website http://www.keystothepast.info/Pages/home.aspx) has been undertaken to identify non-designated, locally important, heritage assets. This information has been included in the baseline section (Section 2.4)</p> <p>The extent to which the identified heritage assets in relation to the planned development are at risk has been considered in the assessment of SA Objective 'Promote Enhance and Respect the Region's Cultural and Heritage'.</p> <p>Noted. This has been considered during the assessment of the SA Objectives.</p> <p>Noted.</p> <p>The significance of the heritage</p>

Consultee	Scoping Response	Comments
	<p>the significance of the heritage assets affected by the plan (directly or indirectly), and to assess and articulate the extent to which that significance might be harmed or destroyed by development which flows from it. This will in turn be crucial as it is the role of the local planning authority to demonstrate that the public benefits (social and economic, or indeed, other environmental benefits) of the plan outweigh any harm or loss to those heritage assets and that the benefit cannot be met by any other means in any other location. Any unnecessary or unjustified harm to the significance of a heritage asset would render the development unsustainable, casting doubt on its deliverability.</p> <ul style="list-style-type: none"> Annex 2 of the NPPF, in its Glossary, advises that 'there will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point'. Paragraph 128 of the NPPF advises that where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, decisions should be based on an appropriate desk-based assessment and where necessary, a field evaluation. Has this work been undertaken? If not, it should be, and if and when it is undertaken it should form part of the evidence base. It is possible that sustainability issues might arise as a consequence. English Heritage welcomes the inclusion, in Table 12.1, of a Sustainability Objective regarding the protection of the historic environment. Further information on objectives, sub-criteria, and indicators is contained in our guidance on Strategic Environmental Assessment, Sustainability Appraisal, and the Historic Environment which can be found at the following website: http://www.english-heritage.org.uk/content/publications/publicationsNew/guidelines-standards/strategic-environ-assessment-sustainability-appraisal-historic-environment/SA_SEA_final.pdf 	<p>assets has been included where relevant to the sustainability baseline (Section 2.4) and included within the SA Objective 'Promote Enhance and Respect the Region's Cultural and Heritage' assessment of this SA.</p> <p>Noted. A desk-based assessment of the archaeological interest and field evaluations have not been undertaken. This will be considered as part of any future planning applications / Environmental Impact Assessments brought forward by the South Sunderland Masterplan. In addition, the SA Objective 'Promote Enhance and Respect the Region's Cultural and Heritage' assessment of this SA includes this as proposed mitigation/enhancement measure.</p> <p>Noted. EH guidance on Strategic Environmental Assessment, Sustainability Appraisal has been consulted to inform this SA.</p>
<p>Natural England (NE)</p>	<p>Sustainability Appraisal Scoping Report Alternatives</p> <ul style="list-style-type: none"> SEA requirement (b) (as identified in table 1.2) includes the assessment of effects upon the 	<p>Noted. See Alternatives Section (Section 3.1 – Alternatives for What?)</p>

Consultee	Scoping Response	Comments
	<p>environment if the SPD is not implemented. This element of the SA scoping report has not been undertaken within chapters 2-10 (as suggested in table 1.2). Given the need to strategically plan future developments within South Sunderland and identify mitigation measures, the negative effects of individual uncoordinated developments should be explained. This should form part of the report's assessment of alternatives.</p> <ul style="list-style-type: none"> The assessment of reasonable alternatives should look at different layouts within the South Sunderland Growth Area (SSGA). Critical to this assessment is their likely significant effects on ecological sites, most notably the international and national sites on Sunderland's and Durham's coast, and priority habitats and species. <p><u>National Character Areas</u></p> <ul style="list-style-type: none"> Natural England has updated the National Character Areas (NCAs) for the Durham Magnesium Limestone Plateau (NCA 15). It can be downloaded from the following webpage: http://publications.naturalengland.org.uk/publication/8308038?category=587130 It includes a description of the natural and cultural features that shape the landscape, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. It therefore integrates biodiversity, water, climate change, heritage and landscape issues. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future. The SEOs would assist the assessment of the SPDs performance against biodiversity, heritage and landscape SA objectives. SEOs for the Durham Magnesium Limestone Plateau include: <ul style="list-style-type: none"> The protection and enhancement of limestone grassland The protection and enhancement of the coast as a place of tranquillity and inspiration that supports wildlife and illustrates the area's industrial past Protection and promotion of the area's rich archaeology and geology to enhance appreciation of its mining heritage, significant role within British industry Seek to ensure that where there is new development it preserves the area's strong sense of place, retains tranquil areas, is appropriate in a changing climate and improves quality of life for local residents <p><u>Biodiversity - Sites of Special Scientific Interest</u></p> <ul style="list-style-type: none"> As some of the interest features within the 	<p>of this SA.</p> <p>Noted. See Alternatives Section (Section 3.1 – Alternatives for What?) of this SA. This should also be considered in combination with the HRA which accompanies this document.</p> <p>Noted. A reference to Natural England's National Character Areas (NCAs) for the Durham Magnesium Limestone Plateau (NCA 15) has been included within the sustainability baseline in section 2.4.</p> <p>Noted</p> <p>The SEOs have been added to the guiding criteria for SA Objectives, where relevant, to assist the assessment of the SPDs performance.</p> <p>Noted. The Assessment of effects has</p>

Consultee	Scoping Response	Comments
	<p>SPA/Ramsar/SAC are broadly similar to those within the SSSI (vegetated sea cliff habitat, turnstone and sandpiper (and their rocky shore habitat), the SA's assessment of effects upon the coastal SSSIs interest features should complement the HRA.</p> <ul style="list-style-type: none"> The SA must however ensure that it examines the effects of the SPD on those features of the SSSI which are excluded from the SAC/SPA citation, these include: exposures of geological features, invertebrates (Durham Argus butterfly and least minor moth), additional wintering birds (Sanderling and Knot) and stretches of open beach habitat. The SA must focus upon the likelihood of significant harm to SSSI interest features to ensure the SSGA SPD complies with paragraph 118 of the NPPF. Whilst the Durham Coast SSSI is in a favourable condition, this does not reflect the varied conditions within the SSSI. The HRA screening report has identified disturbance as an issue within sections of the SPA/SSSI and suggests that the favourable condition in respect of wintering birds is misleading. Furthermore, surveys were undertaken in summer when wintering birds were not present. Natural England has also identified current recreational disturbance as a threat to the condition of the SSSI, most notably around Seaham. Given the conclusions of the HRA screening, the statement within section 2.4 that “the designated area already caters for a range of human activities and is not considered to be significantly impacted at present” should be reconsidered within the SA report. The SA should assess whether increased recreational activity will affect SSSI interests. Invasive plant species within sections of the SSSI have also been identified as a threat to the condition of some SSSI units (most notably within the denes). Development in close proximity to the coast may exacerbate this problem. In addition to the protection of designated sites, the assessment of SPD options should determine which are more likely to preserve, restore or recreate priority habitats within the area and deliver an optimal ecological network. <p><u>Land Resources</u></p> <ul style="list-style-type: none"> The assessment of the SPDs effects on land resources should determine whether significant losses of agricultural land will occur. Paragraph 109 of the NPPF states that planning authorities should protect soils and take into account the benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality. <p><u>Heritage and Landscape</u></p> <ul style="list-style-type: none"> Section 1.3.1 refers to the previous National Character Areas developed by the Countryside Agency. As advised above these have been updated by Natural England and now provide baseline data 	<p>considered the HRA which accompanies this SA.</p> <p>Noted. The SA has considered the effects of the SPD on those features of the SSSI which are excluded from the SAC/SPA citation. This is detailed within the assessment of SA Objective 1</p> <p>Noted, see above.</p> <p>Noted.</p> <p>Noted, the HRA has deemed that due to the implementation of mitigation measures the SPD will not have an adverse effect on the integrity of the Northumbria Coast SPA/Ramsar site or Durham Coast SAC, either alone or in-combination. The interest and assessment of the SSSI have been considered within this SA, within the assessment of Objective 1.</p> <p>Noted.</p> <p>Noted.</p> <p>The classification of agricultural land within the SSGA has been included within the sustainability baseline (Section 2.4). The assessment of the SPD through SA Objective and ‘Strengthen the Regional Economy’ (Section 14) considers the quality of agricultural land.</p> <p>Noted. Reference to Natural England’s updated NCAs has been</p>

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	<p>upon the landscape’s natural and human influences.</p> <ul style="list-style-type: none"> Green Infrastructure (GI) is identified as an influence on landscape. Multi-functional GI however brings wider benefits to wildlife (through the creation of habitats and ecological networks), human health (through space for physical exercise and tranquillity) and combating and adapting to climate change (providing car free walking and cycling routes, reducing urban heat islands and providing flood water storage). The benefits of GI within the SSGA should therefore be considered when examining these issues in the SA. <p><u>SA Objectives and Indicators</u></p> <ul style="list-style-type: none"> The safeguarding and enhancement of the region’s environment is a high level objective, at a local level the protection and enhancement of green space, trees and natural features of note are identified as relevant indicators. These indicators however are vague and as such may be difficult to record. Natural England therefore advises that the preservation, restoration and recreation of priority habitats (as required by the NPPF) should be promoted as a local objective and indicator within the SSGA. National priority habitats have been published under Section 41 of the NERC Act, these are identified locally through the Durham Biodiversity Action Plan (BAP). Priority habitats for South Sunderland include magnesium limestone grassland, lowland meadows and pastures, coastal habitats, road verges and built environments. <p>Habitats Regulations Assessment</p> <ul style="list-style-type: none"> Natural England broadly concurs with the conclusion of the Habitats Regulations Assessment (HRA) Screening Assessment that, due to increased recreational disturbance and trampling, it is not possible to rule out likely significant effects on the Northumbria Coast SPA, Teesdale and Cleveland SPA and Durham Coast SAC. When undertaking the appropriate assessment of these effects, your authority should consider the following advice. The introduction of the screening assessment does not refer to the Northumbria Coast Ramsar. This international site parallels the SPA and its interest features. The Conservation of Habitats and Species Regulations 2010 and NPPF dictate that Ramsar sites are afforded the same level of protection as European sites. The HRA regularly refers to the Northumbria Coast SPA as Northumbrian Coast SPA. The screening assessment has identified Natura 2000 sites within 10 miles (16km) of the growth area as being potentially affected by development within the SPD. This reflects the distance that visitors may travel to access greenspace on the coast and potentially disturb or trample interest features. This precautionary distance is acceptable at the screening stage, however when undertaking the appropriate 	<p>included within the sustainability baseline (Section 2.4).</p> <p>Noted. The benefits of Green Infrastructure (GI) have been considered when examining these issues within the SA. This is discussed within SA Objective 1 and references within the other SA Objectives where relevant.</p> <p>Noted. These indicators have been removed and replaced with ‘Guiding Criteria’ to assist with the SA assessment of the SPD.</p> <p>Noted.</p> <p>The below comments have been considered in the Habitats Regulations Assessment (HRA) report which accompanies this SA.</p> <p>As above.</p> <p>As above.</p> <p>As above.</p> <p>As above.</p>

Consultee	Scoping Response	Comments
	<p>assessment, Sunderland Council should be mindful of Durham’s HRA which has identified the significant majority of visitors to coastal sites within the County coming from 6km (including areas within Sunderland).</p> <ul style="list-style-type: none"> • Within the summary it is suggested that - as there is always likely to be a degree of doubt of the significance of impacts as a result of increased visitors - the appropriate assessment will focus on mitigating significant effects. Whilst determining levels of recreational disturbance and trampling is difficult, the appropriate assessment should ensure that mitigation measures avoid adverse effects on integrity. This will require a robust assessment of the effectiveness and deliverability of proposed mitigation to avoid the likely adverse effects of 2,900 homes in close proximity to the Northumbria Coast SPA and Durham Coast SAC. 	<p>As above.</p>

