

**Norwich Research Park
Development Brief
Supplementary Planning Document**

**Sustainability Appraisal/Strategic
Environmental Assessment**

**APPENDICES TO THE
SUSTAINABILITY APPRAISAL
REPORT**

**Prepared for
South Norfolk Council**

**by
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Appendix I

Companies working out of Norwich Research Park (as at 27 October 2006)

The companies that are working out of NRP (as at 27 October 2006) include:

- Algentech Ltd
 - Anglia DNA
 - AnSpec Consultancy
 - BioVenture Management Ltd
 - Chameleon Bioservices Ltd
 - Content Consultants
 - Eastland Medical Ltd
 - ECON
 - First Choice Foster Care
 - Forensic DNA Services Ltd
 - Global Group
 - Idiom Plus
 - iDNA Genetics
 - Insprialis
 - IM Sense
 - ip21
 - Luminas
 - Model Gut
 - Mead Johnson Nutritionals
 - Medident (Dental Laboratory)
 - Netcase Web Solutions
 - Norwich Pharma
 - PBL
 - Protopharma Ltd
 - Purple Sage
 - RelationChecker
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- Seleggen
- SYS Consulting
- Van Haren Publishing
- Weatherquest

Appendix 2

Summary of consultation responses on the NRP Development Brief SPD SA Scoping Report

SUMMARY OF CONSULTATION RESPONSES ON THE NORWICH RESEARCH PARK DEVELOPMENT BRIEF SA SCOPING REPORT

South Norfolk publicised the NRP Scoping Report between 23/06/06 and 31/07/06, consulting the four statutory bodies (Environment Agency, English Heritage, English Nature and the Countryside Agency), organisations at the NRP, and other stakeholders such as local authorities and interest groups. These bodies/organisations are listed in **Table AI.1**. A number of comments were received, which are summarised in **Table AI.2** along with the subsequent amendments to the SA Report.

Table AI.1: Bodies/Organisations which were invited to comment on the SA Scoping Report

Consultees:			
Statutory bodies		Organisations at NRP (cont'd)	
Andrew Hunter	Environment Agency*	Robin Daniels	NRP Enterprise
Kate Hoskyn	English Heritage (Norfolk)	Anna Graves	Director of Development, Norwich City Council
Peter Lamb	English Nature*	Steven Faulkner	Norfolk County Council, Planning and Transport*
Graham King	Countryside Agency*	David Dukes	Norfolk County Council, Economic Development*
		James Gray	Invest East of England
Organisations at NRP		Natalie Blaken	East of England Development Agency*
James Boddy	Colney Hall	Kevan Williams	Idiom Plus (for Shaping Norfolk's Future)
Ray Houghton	Bidwells Norwich (for Colney Hall)*		
Andy Widdess	NNUH	Other stakeholders	
Anna Dougdale	NNUH (Director, Property and Resources)	Martin Kemp	Colney Developments
Darren Cogman	Bidwells Norwich (for NNUH)*	Dr. Graham Martin	Chair, Colney Parish Meeting*
Roger Bond	Director of Estates, University of East Anglia*	Mrs Hannah Martin	Clerk to Colney Parish Meeting
Glyn Davies	Bidwells Norwich (for UEA)*	Anne Barnes	Clerk to Cringleford Parish Council
Reg Wilson	Institute of Food Research	Elaine Tucker	Yare Valley Society

*Comments were received from these bodies.

Table A1.2: Comments received on the SA Scoping Report and actions proposed to respond to these comments

Consultee	Summary consultation response	Proposed action
Area of Report: General Content		
East of England Development Agency	Ensure that the Scoping Report includes proper reference to the socio-economic impacts of the proposal to provide for sustainable economic development and regeneration.	This is done throughout. The opportunity to develop the research and science and technology sector in the NRP cluster is significant to diversify the District economy.
	Include appropriate links to the Regional Economic Strategy.	Included in Review of Plans & Programmes – Appendix I of the SA Scoping Report.
Landscape Access Recreation (Countryside Agency)	We have read the draft Scoping Report with interest and are satisfied that the Sustainability Appraisal of the Development Brief is proceeding in a proper, logical and comprehensive manner. We are content that the report demonstrates that the appraisal will address the environmental issues in an appropriate manner.	Support is welcomed.
Environment Agency	On the whole, this provides comprehensive coverage of the issues concerned and the various stages that should be followed.	Support is welcomed.
Colney Parish Meeting (Chairman, Dr G. Martin)	The Report seems to be based on the situation five or six years ago but the NRP has moved on. Sustainability Appraisal requires a review and reassessment of existing plans but this report largely fails to address this aspect.	Review and reassessment has been done of all relevant plans and programmes and used to glean context and objectives where appropriate. These are the current background documents relevant to the preparation of the NRP SPD.
	Many of the answers and comments appear to be unsubstantiated opinions and are often misleading or omit critical information.	Issues raised in the Scoping Report are based on information from the LDF SA Scoping Report, as referenced.
	BUPA hospital, one of the institutions of the NRP, does not appear to have been fully consulted or represented on either the Vision Group or the NRP Steering Group.	Not all parties to the NRP are included on the NRP Steering Group or Vision Groups. We will add the BUPA Hospital to the consultation list for the draft NRP Development Brief SPD.
Area of Report: General Content		
UEA Estates, Colney Hall, NNUH (all via Bidwells)	Para 1.1: Specific reference should expand on the description of the bodies that constitute the NRP, for example there is no mention of the School of Nursing and Midwifery (NAM) or the BUPA hospital, and there should be specific reference to UEA.	It is acknowledged that the Scoping Report would benefit from inclusion of a comprehensive list of the NRP constituents. This has been included at paragraph 1.1 of the SA Report.

Consultee	Summary consultation response	Proposed action
Colney Hall	Para 1.17: There is concern that the SPD may not be flexible enough to avoid stifling development, especially within the context of “identified limitations”.	The Development Brief sets out to establish “principles and parameters” for development, encouraging specialist investment. “Identified Limitations” are intended to mean existing constraints. This point regarding the draft purpose of the Development Brief SPD has been forwarded to those preparing the SPD for their consideration.
Area of Report: Section 3 – Sustainability Issues		
UEA Estates (Roger Bond)	Awareness must be raised of the need to strengthen the links between NRP facilities and to the UEA, e.g. access, transport and resources. This is an issue that could support environmental objectives.	<p>This is an area of great importance to the continued success of the NRP and its partnership with the UEA, and will be identified accordingly.</p> <p>The issue is supported by SA Objectives ENV4, EC1, EC2 and EC3. The characterisation of NRP section of the SA Report has been updated to reflect this comment (addition of para. 5.12).</p>
Environment Agency	The Scoping Report does not address, in our view, the loss of what is effectively ‘greenfield land’, and some form of ‘green infrastructure’ could be incorporated as a compensatory measure. A useful reference might be the Environment Agency green infrastructure guide, detailing case studies, and delivery of ‘green infrastructure’ (available via Environment Agency catalogue).	<p>The loss of greenfield land is unfortunate but unavoidable if expansion is to be possible in this research cluster. Section 3 characterises the existing situation at NRP and so will be updated to refer to the fact that land allocated as an extension to NRP is greenfield.</p> <p>SA objective ENV7 includes the following decision-making criteria:</p> <ul style="list-style-type: none"> • Will it avoid the use of productive agricultural land? • Will it minimise the irreversible use of soil resources? <p>An additional decision-making criterion will be added to the SA Framework to ensure that the issue is recognised – ‘Will it maximise the use of brownfield land?’ The appraisal of options will identify the feasibility of integrating green infrastructure into the proposals.</p> <p>Issue is of relevance to SA Objective ENV6, ENV7, EC4.</p>

Consultee	Summary consultation response	Proposed action
	Although the development site is not in a flood plain, we are surprised at its close proximity to the surrounding water bodies. Regard should be given to the possible impacts on water quality and nature from increased run-off and human activity.	These points are all noted. The Scoping Report did not establish designs of development, but illustrated the boundaries of sites involved. Specific designs have come forward through the SPD preferred options and applications. These points have been considered in the appraisal of options through SA objectives ENVI, ENV2 and ENV8, which concern habitat enhancement, flood risk and water quality protection respectively.
	The Environment Agency advocates setting back the buildings from these water bodies to allow generous pedestrian/cycle routes, embankment protection and buffer zone habitat enhancement.	
	The EA is pleased to see the acknowledgement to minimise contributions to climate change and pollution, and this can be enhanced through improved energy efficiency and resource capture in development. Requiring the achievement of BREEAM and EcoHome standards should be automatic.	
Colney Parish Meeting (Chairman, Dr G. Martin)	The Scoping Report is intended to raise the issues for consideration as part of development. This report lacks critical objectivity and issues that might reflect adversely on the expansion are played down or ignored. Other developments in adjacent areas that will affect sustainability of further development in Colney have scarcely been mentioned.	When the NRP was originally allocated such strategic issues as this concern were addressed at that stage. NRP is situated in an appropriate location, and any expansion offers the opportunity to ensure that it complements existing surrounding areas.
	There should be concern for the effects of increased traffic from non-hospital development, in particular the effects for access to the hospital, congestion and pollution brought to the area.	Access and traffic volume issues have been raised in the Scoping Report. The options will be appraised in terms of, among other things, the impact of additional traffic through SA objectives ENV4, ENV5, EC1 and EC3.
UEA Estates, Colney Hall, NNUH	Table 3.1: Need to identify the importance of strong links between the various components of the NRP. Suggest inclusion of <i>'Provision of adequate linkages and sustainable access arrangements within the NRP'</i> as economic issue because this would help to maximise the economic potential.	This is a significant issue to the continued success of the NRP as a sustainable, integrated and networked employment cluster, and is supported through SA Objectives EC1, EC3, and EC4. The suggestion has been used to update the key issues and problems for South Norfolk in the SA Report.
Norfolk County Council	Table 3.1 Identify within the table / section that use of undeveloped land at the NRP is regrettable, but there is a very	Avoiding the use of currently undeveloped land is referred to in the key issues and problems for South Norfolk. This table will be

Consultee	Summary consultation response	Proposed action
(Economic Development)	limited supply of brownfield land in Norwich / South Norfolk.	updated with additional information provided from Norfolk County Council. NRP is locationally-specific as being adjacent to the UEA, Institutes, NNUH etc. and this issue was addressed at the Local Plan stage.
English Nature	Table 3.2: This captures all key environmental issues in proposal.	Support is welcomed.
UEA Estates, Colney Hall, NNUH	Table 3.3: The lack of transport linkages between the components of the NRP is an issue to include here.	This is an important concern closely related to high traffic volumes and will be used to update the characterisation of NRP section of the SA Report.
UEA Estates	Para 3.11: Include the UEA School of Nursing and Midwifery (NAM) here.	The full list of organisations comprising NRP is set out in the Context of NRP section of the SA Report.
NNUH	Para 3.11: Since the hospital was first developed there have been the NAM building, crèche, GP and Big C facilities added to the NRP.	The full list of organisations comprising NRP is set out in the Context of NRP section of the SA Report.
Colney Hall	Para 3.24: Concern that the topographic assessment of Colney Hall presumes prevention of large-scale development. Further, the Scoping Report should not make determinations of 'large-scale'.	The SA Report has been updated in light of this comment.
English Nature	<p>Para 3.27 and Table 3.2: Need to address potential impacts on the County Wildlife Sites in the area and avoid harm where possible. 5 site locations mentioned and recommendation to use mapping to identify sensitive areas.</p> <p>Sensitive bat and bird populations will be threatened if the plans involve any tree or hedge belt removal.</p>	<p>SA Report updated setting out location and specific vulnerabilities of the following County Wildlife Sites:</p> <ul style="list-style-type: none"> • Earlham Marsh • Heronry and Violet Grove • UEA Marsh • UEA Butterfly Meadow • Bowthorpe Riverside <p>SA Report updated to reflect potential sensitivities to bats, birds and otter habitats.</p> <p>Plans will try to ensure that disruption to habitat is minimal. These will be assessed through SA Framework objective ENVI.</p>

Consultee	Summary consultation response	Proposed action
English Nature	Liaison needed with Norfolk Biological Records Centre (NRBC) for species records in the area and subsequent impact assessment.	<p>NBRC provided lists of priority species found at site, which have been used to update the SA Report. In particular, 9 Biodiversity Action Plan target species have been identified:</p> <ul style="list-style-type: none"> • Water Vole • Red Squirrel • Otter • Smooth Newt • Barn Owl • Pipistrelle • Common Toad • Grass Snake • Common Frog. <p>Potential effects on these species will be considered through SA objective ENVI.</p>
English Nature	Para 3.31 and Table 3.2: Impacts to water resources should be a key test of the SA. Should avoid increase in site water abstraction and / or sewage loading. River catchment should not increase 'flashiness' in response to rainfall as this could increase flooding in the valley.	This issue is highlighted in para 3.31 of the Scoping Report. The impacts of the options on water resources and flooding will be identified in the appraisal of options through SA Objectives ENV 2 and ENV8 (on flood risk and water quality/consumption respectively).
NNUH	Para 3.31: It is pleasing to see the issues of water shortages have been identified, and the Hospital has made some provision for this. Suggested inclusion of other infrastructure pressures, such as electricity and drainage capacity.	Support is welcomed. The Scoping Report sets out the existing situation in the local area of NRP. Whilst there is a lack of baseline information on electricity and drainage capacity in the area, the effect of the Development Brief on these provisions will be identified in the appraisal of options, against SA objectives ENV3 and ENV8.
UEA Estates	Para 3.33: Contrary to "a general lack of open space for recreational needs", NRP is located next to Earlham Park and UEA playing fields, both with public access.	Amendment welcomed. The SA Report has been updated using this information.
	Access to the UEA is restricted to an entrance on Earlham Road, identified as often reaching capacity traffic volume. Any NRP	Access and traffic volume issues have been raised in the Scoping Report. The options will be appraised in terms of, among other

Consultee	Summary consultation response	Proposed action
	expansion would add to this and so the lack of access for private and public transport is a problem.	things, the impact of additional traffic through SA objectives ENV4, ENV5, EC1 and EC3.
Colney Hall	Para 3.34: NRP expansion would add to traffic volume and restrictive access to UEA will be a problem.	Access and traffic volume issues have been raised in the Scoping Report. The options will be appraised in terms of, among other things, the impact of additional traffic through SA objectives ENV4, ENV5, EC1 and EC3.
Colney Hall, UEA Estates, NNUH	Para 3.35: Colney Lane east of NNUH is no longer a bus only route.	SA Report has been updated.
UEA Estates, Colney Hall, NNUH	Para 3.36: This paragraph is inaccurate and should be replaced with a technically correct one: “There is an existing road between the main UEA campus and the existing Colney Lane research institutes, which is currently voluntarily restricted in use to specific vehicles during off-peak hours. There is also a permissive pedestrian and cycle route between the campus and Colney Lane, which continues to NNUH and NAM. There is currently no direct public transport route between Colney Lane and the main UEA campus, although a bus service is available via Colney Lane, the Watton Road and Earlham.”	SA Report has been updated.
Norfolk County Council (Economic Development)	Para 3.39 is a confusing paragraph and includes an inaccurate use of ‘East Anglia’.	East Anglia as a recognised area does still exist, comprising Norfolk, Suffolk and Cambridgeshire, so this remains valid. However, amendments have been made to the SA Report to make this paragraph clearer.
UEA Estates	Para 3.39: NNUH and the UEA also have significant impacts on the economy. NAM has 150+ staff.	The SA Report has been updated.

Consultee	Summary consultation response	Proposed action
NNUH	Para 3.39: Make reference to substantive impact on the economy from NNUH, directly employing 5,400 and indirectly 1000.	The SA Report has been updated.
Norfolk County Council (Economic Development)	Para 3.40: The Scoping Report should stress the opportunities for job creation through NRP expansion.	Support is welcomed, and this is recognised in Para 3.40. In addition, opportunities for job creation will be identified through the appraisal of options, through SA objectives S3, S4, EC1, EC2 and EC4.
UEA Estates, NNUH	Para 3.42: Add the phrase: "...and its linkages with the UEA and NNUH" to reinforce its need in this paragraph.	The SA Report has been updated.
Colney Hall	Para 3.42: Include the possibility that inward investment can diversify the range of employment offered at the site.	The SA Report has been updated.
Norfolk County Council (Economic Development)	Para 3.42: Not only does the NRP attract inward investment to the District, it encourages home-grown business spin-out and significant international investment.	
Area of Report: Section 4 – Sustainability Appraisal Framework		
English Nature	Table 4.1: This is a suitable framework to assess proposals against.	Support is welcomed.
Norfolk County Council (Officer-Level response)	Support for the aims and objectives underpinning report.	Support is welcomed.
	<ul style="list-style-type: none">• Include potential for use of renewable energy schemes to form part of any development.• Development Brief could include objectives / criteria to assess renewable energy uses in area.	SA objective ENV3 seeks to maximise the use of renewable energy solutions and reduce contributions to climate change.
	Reference should be made in the report to securing developer funding for any necessary infrastructure and service provision arising from NRP expansion.	The SA Report has been updated with this suggestion. However, it is not thought to be relevant to the SA Framework.

Consultee	Summary consultation response	Proposed action
Environment Agency	<p>Promoting resource efficiency, in particular water saving and energy reduction is important, and so include one of these two climate change guidance notes:</p> <ul style="list-style-type: none"> • ‘Adapting to climate change: a checklist for development’ by the Three Regions Climate Change Group. (www.london.gov.uk/climatechange/partnership/docs/adapting_to_climate_change.pdf) • ‘The Planning Response to Climate Change – Advice on Better Practice’ for the ODPM www.communities.gov.uk/pub/498/ThePlanningResponsetoClimateChangeAdviceonB) <p>The chapters here on water resources, built environment, biodiversity, and landscape and the environmental assessment of buildings are all of relevance to this development brief with a design checklist to raise awareness among developers.</p> <p>It could be useful to reference information gained on water efficiency measures, with residential advice being adapted to the research park. (See www.environment-agency.gov.uk).</p>	<p>These will be of considerable value for the design of the plans that come forward through the Development Brief, and possibly for any design element to the SPD of Options. The review of plans and programmes at this stage is intended to unearth the factors that need to be considered from policy and legislation affecting the area and/or topics covered in the development plan.</p>

Appendix 3

Review of plans and programme

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
International				
The Johannesburg Declaration on Sustainable Development, 2002	Reaffirmation of international commitment to Sustainable Development and 10 year framework of action: Reverse trend in loss of natural resources Urgently and substantially increase (global) share or renewable energy Significantly reduce loss of Biodiversity by 2010	Significantly reduce loss of biodiversity by 2010	Encouragement of sustainable development patterns Development and innovation in renewable energy Protection and enhancement of opportunities for Biodiversity	Maintain and enhance biodiversity, geodiversity, flora and fauna Maximise use of renewable energy solutions and reduce contributions to climate change Reduce vulnerability to climate change
European Water Framework Directive (2000/60/EC)	Seeks to establish a framework for the protection of inland, surface, transitional and coastal waters.		LDDs have significant role to play in protection and management of water resources. Important that the issues highlighted in the directive are considered as appropriate	Provide for sustainable use and sources of water supply
National				
Choosing Health Public White Paper (2004)	This White Paper sets out the key principles for supporting the public to make healthier and more informed choices in regards to their health. The Government will provide information and practical support to get people motivated and improve emotional wellbeing and access to services so that healthy choices are easier to make.		The LDD must incorporate issues such as health, in addition to more traditional topics such as housing or employment	Maintenance and improvement of the health of the population overall
Energy White Paper: Our Energy Future – creating a low carbon economy (2003)	Defines a long term strategic vision for energy policy combining environmental, security of supply, competitiveness and social goals. 4 goals for energy policy: 1. to cut UK carbon dioxide emissions by 60% by 2050, with real progress by 2020		To develop policies which promote sustainable energy use	Reduce effect of traffic on the environment Improve air quality Maximise renewable energy solutions and

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	2. to maintain reliability of energy supplies 3. to promote competitive markets to raise the rate of sustainable economic growth and improve productivity 4. to ensure every home is adequately and affordably heated			reduce contributions to climate change Reduce vulnerability to climate change
National Service Framework for Older People (2001)	With an increasing number of older people within the population the National Service Framework sets out standards which aim to provide person-centred care, remove age discrimination, promote older people's health and independence and to 'fit services around people's needs'. The document details 8 standards with milestones.		The LDD needs to take account of the needs of different groups in society, such as older people	Reduce poverty and social exclusion Maintenance and improvement of the health of the population overall Improve the quality of where people live Improve accessibility to essential services and facilities including to those most in need
Rural Strategy (Defra, 2004)	In addressing the economic and social disparities in rural areas, a new approach to policy and delivery is needed for service partnerships at different scales. The 3 priorities are: <ul style="list-style-type: none"> • Economic and social regeneration – targeting greater resources at areas of greater need. • Social justice for all – tackling exclusion and providing fair access to services and opportunities. • Enhancing countryside value – protecting the natural environment. 		To encourage local partners to work together in a collaborative way to deliver more sustainable rural communities and an enhanced and enriched countryside.	SA will have to ensure that there is a consistent balance between objectives to bring rural enterprise to benefit communities and care for the environment.
Saving Lives: Our	An action plan to tackle poor health, to improve the	By 2010:	To recognise the	Maintenance and

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
Healthier Nation White Paper (1999)	health of everyone and the worst off in particular. The Plan focuses on the main killers: cancer, coronary heart disease and stroke, accidents and mental illness	<ul style="list-style-type: none"> • Cancer: to reduce death rate in people under 75 by at least a fifth • Coronary heart disease & stroke: to reduce death rate in people under 75 by two fifths • Accidents: to reduce death rate by a fifth and serious injury by a tenth • Mental illness: to reduce death rate from suicide & undetermined injury by a fifth 	importance of health issues and involvement of the Primary Care Trust in the preparation of the LDD	improvement of the health of the population overall
Securing the Future: Delivering the UK Sustainable Development Strategy (2005)	<p>A Government-led UK strategic framework for sustainable development covering the period up to 2020. Its intension is to integrate progress towards the main aims across all Government agencies and devolved authorities.</p> <p>Strategy has 4 main aims:</p> <ol style="list-style-type: none"> 1. social progress which recognises the needs of everyone 2. effective protection of the environment 3. prudent use of natural resources 4. maintenance of high and stable levels of economic growth and employment <p>The Strategy also outlines priorities for the future in the UK and 10 guiding principles for Government policy</p>	The Strategy has a system of indicators to measure progress	<p>The concept of Sustainable Development underlies the whole LDD process, with immediate action being taken towards:</p> <ul style="list-style-type: none"> • Sustainable Consumption and Production • Climate Change and Energy • Natural Resource Protection and Environmental Enhancement • Sustainable 	Implications across SA to ensure that policies consider the overriding national need of working towards these aims.

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
			Communities	
The State of the Countryside Report (2005)	Provides an integrated health check on rural England and the wider countryside.		To develop policies which recognise the rural nature and associated issues of South Norfolk	Implications across SA
Strategy for Sustainable Farming and Food (2002)	Looks at the serious long term problems faced by the farming sector. Sets out a number of key principles for sustainable farming and food now and in the future.		To recognise the issues faced by the farming community in a rural District such as South Norfolk	Conserve quality and quantity of soil resources Encourage sustained economic growth Support economic performance in rural areas
Tackling Health Inequalities – A Programme for Action (2003)	This Programme for Action sets out plans to tackle health inequalities over the next three years. It establishes the foundations required to achieve the challenging national targets for 2010 to reduce the gap in infant mortality across social groups and raise life expectancy in the most disadvantaged areas faster than elsewhere.		The LDD must incorporate issues such as health, in addition to more traditional topics such as housing or employment	Maintenance and improvement of the health of the population overall
UK Waste Strategy (2000)	A Strategy for managing waste and resources better. It sets out the changes needed to deliver sustainable development			Minimise the production of waste
UK Biodiversity Steering Group – The UK Biodiversity Action Plan	<p>'Chapter 7 on Towns, cities and development is of greatest relevance and recognises the need for biodiversity to become a part of the development policy on sustainable communities, urban green space and the built environment.</p> <p>The aims of the strategy include:</p> <ul style="list-style-type: none"> To ensure that construction, planning, development and regeneration have minimal adverse impacts on biodiversity and enhance it where possible. To ensure that biodiversity conservation is integral to sustainable urban communities, both on the built 		The LDD should seek to protect and enhance biodiversity through protecting designated sites as well as broader biodiversity values, and through promoting wildlife friendly developments which have the potential to enhance biodiversity values.	Protect and enhance biodiversity.

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>environment, and in parks and green spaces.</p> <ul style="list-style-type: none"> To ensure that biodiversity conservation is integral to measures to improve the quality of people's lives. <p>The main concerns for biodiversity associated with urbanisation and development include:</p> <ul style="list-style-type: none"> Pressure on high-value land for development and other uses leads to the potential for conflict with biodiversity objectives. Urban green spaces often consist of highly-managed, largely artificial landscapes used for competing interests and maintained using methods not always sympathetic to biodiversity. The population density of urban areas leaves little space for natural processes to operate effectively. A common perception that nature is not of or for towns and cities, and thus an unwanted intrusion. <p>Gardening practices can be the source of introduced species.' *</p>			
National: Planning Policy Guidance Notes and Planning Policy Statements				
PPSI - Delivering Sustainable Communities (2005)	<p>Planning should facilitate and promote sustainable and inclusive patterns of urban and rural development by:</p> <p>Making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life</p> <p>Contributing to sustainable economic development</p> <p>Protecting and enhancing the natural and historic environment, the quality and character of the countryside and existing communities</p> <p>Ensuring high quality development through good and inclusive design and the efficient use of resources</p> <p>Ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the</p>		<p>Focus development in sustainable locations, with good access to employment and facilities</p> <p>Encourage good design</p> <p>Protect the natural and built environment</p>	<p>Reduce the effect of traffic on the environment</p> <p>Improve accessibility to essential services and facilities</p> <p>Encourage efficient patterns of movement to support economic growth</p> <p>Encourage sustained economic growth</p> <p>Maintain and enhance the</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	jobs and key services for all members of the community			<p>distinctiveness and quality of landscapes and townscapes</p> <p>To conserve and, where appropriate enhance the historic environment</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p> <p>Reduce anti-social activity</p> <p>Maintain and enhance biodiversity, geodiversity, flora and fauna</p>
PPG3 – Housing (2000)	<p>Plan to meet the housing requirements of the whole community, including those in housing need</p> <p>Provide wider housing opportunity and choice and a better mix in size, type and location and seek to create mixed communities</p> <p>Provide sufficient housing land but give priority to re-using previously-developed land, empty homes and conversion of existing buildings, in preference to Greenfield sites</p> <p>Create more sustainable patterns of development by incorporating accessibility by public transport to jobs, education and health facilities, shopping, leisure and local services</p> <p>Place the needs of people before ease of traffic movement in designing the layout of residential developments</p> <p>Seek to reduce car dependence by facilitating more walking and cycling, by improving linkages by public transport between housing, jobs, local services and</p>		Various implications for housing policies	<p>Provide everybody with the opportunity of a decent home</p> <p>Improve the quality of where people live</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Improve accessibility to essential services and facilities</p> <p>Reduce the effect of traffic on the environment</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	local amenity, and by planning for mixed use; and Promote good design in new developments in order to create attractive, high-quality living environments.			
PPG4 - Industrial and Commercial Development and Small Firms (2001)	<p>Development plans should give developers and local communities greater certainty about the types of development that will or will not be permitted in a given location.</p> <p>Planning authorities should ensure that their development plans contain clear land-use policies for different types of industrial and commercial development and positive policies to provide for the needs of small businesses</p> <p>Policies should provide for choice, flexibility and competition. Planning authorities should be realistic in their assessment of the needs of business. They should aim to ensure that there is sufficient land available which is capable of development and served by infrastructure.</p> <p>Development plan policies must take account of business needs and seek to achieve wider objectives (sustainability) in the public interest.</p>		Various implications for economic development policies	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p> <p>Encourage efficient patterns of movement in support of economic growth</p> <p>Improve economic performance in rural areas</p> <p>Improve the social and environmental performance of the economy</p>
PPS6 – Planning for Town Centres (2005)	<p>Key objectives:</p> <p>To promote the vitality and viability of town centres by:</p> <ul style="list-style-type: none"> • Planning for the growth and development of existing centres • Promoting and enhancing existing centres by focusing development in such centres and encouraging a wide range of services in a good environment, accessible to all <p>Other objectives:</p> <ul style="list-style-type: none"> • Enhance consumer choice by providing for a range of services to meet the needs of the entire community, particularly socially excluded groups 		<p>Various implications for retail and town centre use development policies including:</p> <ul style="list-style-type: none"> • A defined hierarchy of centres • Identification of sites and buildings for development • Mixed use town centre developments • Policies to manage the night time 	<p>Improve accessibility to essential services and facilities, including to those most in need</p> <p>Reduce the effect of traffic on the environment</p> <p>Encourage sustained economic growth</p>

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	<ul style="list-style-type: none"> • Support efficient, competitive retail, leisure, tourism and other sectors • Improve accessibility, ensuring development will be accessible by a choice of means of transport • Promote social inclusion • Encourage investment to regenerate deprived areas • Promote economic growth • Deliver sustainable patterns of development 		<p>economy</p> <ul style="list-style-type: none"> • Protection of existing facilities such as local shops. 	
PPS 7 - Sustainable Development in Rural Communities (2004)	<ul style="list-style-type: none"> • Policies in LDDs should facilitate and promote sustainable patterns of development. Policies to sustain, enhance and where appropriate, revitalise country towns and villages and for strong, diverse, economic activity, whilst maintaining local character and a high quality environment. • Local Authorities should focus most new development in or near Local Service Centres • Identify in LDDs suitable sites for future economic development, particularly in those rural areas where there is a need for employment creation and economic regeneration. • Set out in LDDs the criteria for permitting economic development in different locations, including future expansion of existing businesses, to facilitate healthy and diverse economic activity in rural areas • Local authorities should plan for accessible new services and facilities. Ensure development in service centres is supported through improvements to public transport, walking and cycling facilities. • Identify suitable buildings and development sites for community services and facilities to meet the needs of the whole community, including disabled users • Promote good design in new developments in order to create attractive, high-quality living environments. • Policies in LDDs should support suitably located and designed development necessary to facilitate the 		<p>Requirement for policy in LDDs to promote sustainable patterns of development.</p> <p>Identify sites for future economic development in rural areas</p> <p>Requirement for policy in LDD for permitting new economic development in different locations and extensions to existing premises.</p> <p>Implications for design policies</p> <p>Criteria based policy in LDD</p>	<p>Reduce poverty and social exclusion</p> <p>Provide everybody with the opportunity of a decent home</p> <p>Encourage community identity, good behaviour and co operative attitudes</p> <p>To improve the quality of where people live</p> <p>Improve accessibility to essential services and facilities including to those most in need</p> <p>Reduce the effect of traffic on the environment.</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>To encourage sustained economic growth</p>

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	economic and social well-being of these designated areas and communities, including the provision of adequate housing to identified local needs			<p>economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p> <p>Encourage efficient patterns of movement to support economic growth</p> <p>To improve economic performance in rural areas</p>
PPG8 – Telecommunications (2001)	<ul style="list-style-type: none"> Facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum. 		Requirement for policy in LDDs	Improve accessibility to essential services and facilities
PPS9 – Biodiversity and Geological Conservation (2005)	<ul style="list-style-type: none"> Policies and plans should seek to maintain, enhance and add to the biodiversity conservation interests. Developments that conserve or enhance biodiversity and geological interests should be considered favourably. Policies should be grounded on up-to-date information about environmental characteristics of an area. LDDs should be consistent with national, regional and local biodiversity objectives. LDFs should identify any areas for the restoration or creation of new priority habitats, which contribute to regional targets, and support this restoration through appropriate policies. International and national designations should be protected in appropriate policy, and regional and local sites with criteria based policies, with other sites identified. 	Careful monitoring of designated sites will be required	<p>LDDs should reflect national and local biodiversity and geologic conservation priorities through the use of policies that are consistent with those underlying objectives.</p> <p>Governments aim is to conserve, enhance and restore the diversity of wildlife and geology.</p> <p>Sites will need to be identified on proposals maps and where relevant should be acknowledged in policy</p>	<p>Developments that conserve or enhance biodiversity and geological interests of the area and/or the immediate locality should be considered favourably.</p> <p>SA will have to assess the implications of policies and proposals on wildlife and geology.</p>

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	<ul style="list-style-type: none"> • Networks of habitats should be enhanced and protected against fragmentation, perhaps as open space or access provisions. • Brownfield sites with recognised importance should retain or incorporate interest features. • Lists of habitats and species of statutory protection as decreed by Defra should be protected for biodiversity importance. 		<p>in policy.</p> <p>Policy should consider the requirements for enhancing connectivity between habitats.</p> <p>LDDs should ensure that re-use of previously developed land recognises the potential value of established habitats and its implications for housing capacity.</p>	
PPS10: Planning for Sustainable Waste Management	<p>The statement sets out a number of key planning objectives that aim to</p> <ul style="list-style-type: none"> • Drive waste management up the waste hierarchy; • Provide sufficient and timely provision of waste management facilities that meet the needs of their communities; • Implement the national waste strategy and support European legislation; • Secure the recovery and disposal of waste does not harm the human health or the environment • Ensure waste is disposed of as near as possible to the place of production • Reflect the concerns and interests of local communities, needs of waste collection/disposal authorities and business and encourages competition • Protect the Green Belt, but, recognise that some types of waste management facilities have wider environmental and economic benefits of waste management are a material consideration 		<p>Development can be planned in such a way as to ensure the provision of recycling facilities and to encourage the proximity principle, by locating waste collection facilities in close proximity to the source of the waste.</p>	<p>Minimise the production of waste.</p>

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	<ul style="list-style-type: none"> Ensure that the layout and design of new development support sustainable waste management Self-sufficiency that represents the volume and composition of waste generated at the regional level <p>The statement details the requirements of the regional planning bodies over the next 15-20 years, taking into consideration national forecasts and the capacity of urban and rural areas and providing guidance on determining capacity. The statement also provides a sequential approach to identifying sites and locations and guidance in determining planning applications.</p>			
PPS 12: Local Development Frameworks (2004)	Sets out the Government's policy on the preparation of the local development documents, which will comprise the local development framework. The document outlines the structure and content of a LDF and the process of preparation		This PPS is fundamental to the process of preparing LDDs.	Implications across SA
PPG13 – Transport (2001)	<p>Promote more sustainable transport choices for both people and for moving freight.</p> <p>Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling.</p> <p>Reduce the need to travel, especially by car.</p> <p>Locate day-to-day facilities in local centres so that they are accessible by walking and cycling.</p> <p>Accommodate housing principally within existing urban areas, planning for increased density for both housing and other uses at locations which are highly accessible by public transport, walking and cycling.</p> <p>Ensure that the needs of disabled people are taken into account in the implementation of planning policies and traffic management schemes, and in the design of individual developments</p> <p>Consider how best to reduce crime and the fear of crime, and seek by the design and layout of developments and areas, to secure community and road safety.</p>			<p>Encourage efficient patterns of movement to support economic growth</p> <p>Improve accessibility to essential services and facilities</p> <p>Maintenance and improvement of the health of the population</p> <p>Reduce the effect of traffic on the environment</p> <p>Reduce anti-social behaviour</p> <p>Improve the quality of urban people live</p>

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				where people live
PPG14 – Development on Unstable land (1990)	<p>Minimising the risk of land instability on property, infrastructure and the public.</p> <p>Ensure development should not be placed in unstable locations without precautions.</p> <p>Bring unstable land back into use.</p> <p>Assist in safeguarding public and private investment by proper appreciation of site conditions and precautionary measures.</p>		Requirement for Policy relating to the reclamation and use of unstable land	<p>Improve the quality of where people live</p> <p>Maintenance and improvement of the health of the population</p>
PPG15 – Planning and the Historic Environment (1994)	The protection of the historic environment, whether individual listed buildings, conservation areas, historic parks and gardens will need to be taken into account in the formulation of policy and in development control decisions		Requirement for policies to protect the historic environment	<p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>To conserve and, where appropriate enhance the historic environment</p>
PPG16 – Archaeology and Planning (1993)	<ul style="list-style-type: none"> • Archaeological remains are a finite and non-renewable resource. Appropriate management is required to ensure they survive in good condition. • Where nationally important archaeological remains and their settings are affected by proposed development, there should be a presumption in favour of their physical preservation. 		Requirement for policies for the protection, enhancement, and preservation of sites of archaeological interest and their settings.	To conserve and, where appropriate enhance the historic environment
PPG17 – Planning for open space, sport and recreation (2002)	<ul style="list-style-type: none"> • Local networks of high quality open spaces, sports and recreational facilities • Well planned and maintained open spaces and good quality sports and recreational facilities • High quality open space and recreational facilities should be recognised and protected • In identifying new areas of open space, sports and recreation, local authorities should: • Promote accessibility by walking, cycling and public transport 		<p>Requirement for local authorities to assess both quantitatively and qualitatively the needs and opportunities for open space, sport and recreation in their areas.</p> <p>Policy to protect high quality open spaces and recreational facilities</p>	<p>Maintenance and improvement of the health of the population</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p> <p>Improve the quality of where people live</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<ul style="list-style-type: none"> • Locate more intensive uses in town centres where they can contribute to vitality and viability • Avoid loss of amenity to neighbours, neighbouring uses and biodiversity • Improve quality of the public realm through better design • Look to provide open space in commercial and industrial areas • Add to and enhance existing facilities • Consider security and personal safety • Utilise Brownfield sites in preference to Greenfield • Consider using surplus land for open space, sport and recreation • Assess impact of facilities on social inclusion • Consider needs of tourists and visitors 			<p>Reduce anti social activity</p> <p>Maintain and enhance biodiversity, geodiversity, flora and fauna</p> <p>To reduce the effect of traffic on the environment</p> <p>Improve accessibility to essential services and facilities</p>
PPS 22 - Renewable Energy (2004)	<ul style="list-style-type: none"> • Allocations for renewable energy developments should be encouraged. • LPAs can include policies that require a percentage of the energy to be used in new residential, commercial or industrial developments to come from on-site renewable energy developments • LPAs to set out criteria based policies setting out circumstances in which particular sizes, types of renewable energy developments will be acceptable in nationally designated areas 		<p>LDDs to contain site specific criteria</p> <p>LDD policy requiring a % of energy to come from on-site renewables</p> <p>LDDs to contain criteria based policy</p>	<p>Maximise use of renewable energy solutions and reduce contributions to climate change</p> <p>Reduce vulnerability to climate change</p> <p>Minimise the production of waste</p> <p>Improve air quality</p> <p>Improve the social and environmental performance of the economy</p> <p>Maintain and enhance biodiversity, geodiversity, flora and fauna</p>

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PPS 23 - Planning and Pollution Control (2004)	Urban and rural regeneration and the redevelopment of previously developed sites are key priorities. A balanced approach is required addressing the risk of pollution whilst recognising the benefits of recycling land and the damage to community and business caused by failing to remediate contaminated land.		Implications for LDD and Development Control	Maintenance and improvement of the health of the population
PPG24 - Planning and Noise (1994)	The impact of noise can be a material consideration in the determination of planning applications.		Reflected in LDDs	Maintenance and improvement of the health of the population Reduce anti-social activity
PPG25 – Development and flood risk (2001)	Reduce the vulnerability of the country to the dangers and damage caused by unmanaged floods The precautionary principle as advocated in the Rio Declaration (1992) will be used by the Government to manage development and flood risk.		Local Authorities should in accordance with the precautionary principal, follow the sequential approach to location of development.	Provide for sustainable use and sources of water supply
Regional				
Draft Regional Spatial Strategy RSS14 “East of England Plan”				
Core Spatial Strategy policy SS1/SS2/SS3	<ul style="list-style-type: none"> Achieving a sustainable relationship between jobs, homes and services Focus of major developments into urban areas and, market towns using previously developed land. Focus development in and adjoining urban areas 		<p>Need to adopt a sequential approach to the location of major development.</p> <p>Focus major developments to accessible town centre locations.</p> <p>Development strategy consistent with sequential approach</p>	Improve accessibility to essential services and facilities
SS4/5	<ul style="list-style-type: none"> 60% target for brownfield site use Ensure vibrant and attractive town centres. Strategy 	60% use of PDL	LDDs to allocate suitable PDL for development	Maintain and enhance the distinctiveness and quality of landscapes and

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	needed for each centre		Strategy needed for each centre	of landscapes and townscapes
SS6	<ul style="list-style-type: none"> Reduce the need to travel, seek improvements designed to encourage walking, cycling and public transport 		Consider land uses and management of fringe areas	<p>Reduce the effect of traffic on the environment</p> <p>Maintenance and improvement of the health of the population</p>
SS9	<ul style="list-style-type: none"> Sustain the viability and re-vitalisation of market towns Managing development pressure in rural settlements 	Market town health checks	<p>Highlight roles of market towns</p> <p>Assess sustainability of rural settlements.</p>	<p>Encourage sustained economic growth</p> <p>Improve accessibility to essential services and facilities</p> <p>Improve economic improvement in rural areas</p>
SSI0	<ul style="list-style-type: none"> Facilitate delivery of the Regional Economic Strategy 	42 600 jobs to Norfolk (potential 15,000 new jobs for South Norfolk)	Clear focussed policies on employment activity	Encourage sustained economic growth
SSI1	<ul style="list-style-type: none"> Areas for regeneration, including: Great Yarmouth; Kings Lynn and West Norfolk; Norwich: and remote areas of rural Norfolk 		<p>Co-ordinated approach needed to economic, social and environmental deprivation.</p> <p>LDDs to set out policies to tackle problems of economic, social, and environmental deprivation</p>	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p> <p>Improve economic performance in rural areas</p> <p>Encourage local community identity, good</p>

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				behaviour and co-operative attitudes
SS11	<ul style="list-style-type: none"> Areas for regeneration, including: Great Yarmouth; Kings Lynn and West Norfolk; Norwich: and remote areas of rural Norfolk 		<p>Co-ordinated approach needed to economic, social and environmental deprivation.</p> <p>LDDs to set out policies to tackle problems of economic, social, and environmental deprivation</p>	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p> <p>Improve economic performance in rural areas</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p>
SS12	Need for working with partners to make provision for the land use needs of health, education, and social services.	Indicators of health, educational attainment and deprivation.	<p>Need to translate the provider's aspirations to spatial provision.</p> <p>Will underpin other agencies activities.</p>	<p>Encourage community identity, good behaviour and co-operative attitudes</p> <p>Maintenance and improvement of the health of the population</p> <p>Improve education and skills of the population</p>
SS14	<p>Minimisation of development being affected by flooding. By:</p> <ul style="list-style-type: none"> Use of SFRA Clear policies to protect flood areas Only exceptionally use floodplains for development, and then with mitigation. 	Ha of flood areas taken to development.	Clear use of EA flood mapping, and strict policies in LDDs to avoid development. In areas at risk from flooding.	Provide for sustainable use and sources of water supply
SS16	Delivery of high quality new development, including:	Development not less	Key element of physical	Maintain and enhance the

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	<ul style="list-style-type: none"> • Maximum density appropriate. • Good accessibility • Equal access • Community safety addressed • Promote resource efficiency • Use of built heritage to reinforce regeneration. 	than 30dph	aspects of development that will affect the less tangible factors such as health, aspirations, social well-being and regeneration.	<p>distinctiveness and quality of landscapes and townscapes</p> <p>Providing everybody with the opportunity of a decent home</p> <p>Improve accessibility for those most in need</p> <p>Encourage community identity, good behaviour and co-operative attitudes</p> <p>Reduce anti-social activity</p>
NSR1	<p>Strategic locations in South Norfolk of significance to future development of the sub region:</p> <ul style="list-style-type: none"> • Longwater, Costessey for business park use • Colney/Cringleford area, expansion of research park facilities and hospital related uses • A11 corridor, including Wymondham for potential high tech development 		Policy in LDD to reflect the importance of these locations in the context of the sub region	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p> <p>Encourage efficient patterns of movement to support economic growth</p>
NSR2	The development of economically, socially and environmentally sustainable tourism throughout the sub region, particularly highlighting the Broads		Policies to promote sustainable tourism in the sub region	<p>Encourage sustained economic growth</p> <p>Maintain and enhance biodiversity, geodiversity, flora and fauna</p> <p>Conserve and where appropriate enhance the</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
				historic environment
NSR4	Provision of 45500 dwellings in Norwich sub-region up to 2021	District wide housing monitoring	11,200 dwellings in South Norfolk to be provided in Norwich sub-region, 8,400 of which in the Norwich Policy Area.	Providing everybody with the opportunity of a decent home
NSR6	<ul style="list-style-type: none"> Protection and enhancement of the historic setting of Norwich Prevention of inappropriate development in river valleys, green wedges and the landscape setting of the southern bypass that contribute to the setting of Norwich 		Policies in LDD to protect the historic setting of Norwich	<p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Conserve and where appropriate enhance the historic environment</p>
E1	Requirement to ensure that sufficient land is available for training and education purposes to meet the needs identified in other strategies	Meet the needs in other strategies	Policies in LDDs to identify land and future needs	<p>Improve education and skills of population</p> <p>Opportunities for rewarding and satisfying employment</p>
E2	Provision of 421,500 jobs between 2001 and 2021 across the Region as a whole, 42,600 jobs for Norfolk. Potential 15,000 new jobs for South Norfolk	Employment Land Monitoring	Policies in LDDs to identify land and buildings for employment uses and other interventions as outlined in Norfolk Employment Growth Study	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p>
E3	Locations for employment allocations will focus on key market towns and urban areas, where they minimise commuting, where maximum use of public transport can be made, where minimise loss of or damage to the environment, emphasis on previously developed land and where needs of economic clusters can be met	Employment land monitoring	Policies in LDDs setting out criteria for allocating employment land	<p>To reduce effect of traffic on the environment</p> <p>To encourage sustained economic growth</p> <p>To maintain and enhance</p>

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				biodiversity, geodiversity, flora and fauna To encourage efficient patterns of movement in support of economic growth To improve the social and environmental performance of the economy
E4	Provision of Strategic Employment Sites in key locations		Allocations in LDDs to meet the needs of business in key locations	To encourage sustained economic growth Encourage and accommodate both indigenous and inward investment Encourage efficient patterns of movement to support economic growth
E5	Supporting economic diversity and business development	Employment Monitoring	Policies in LDDs that assess the requirements of various sectors of the local economy and ensure that sufficient levels of land to meet their needs is allocated	To encourage sustained economic growth Encourage and accommodate both indigenous and inward investment Encourage efficient patterns of movement to support economic growth
E6	Improving information and communications technology		Policy in LDDs to ensure	Improve accessibility to

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			that acceptable provision can be made for ICT, subject to environmental constraints	essential services and facilities
E7	Supporting Cluster Development		LDDs to contain policy and/or allocations to support clusters identified by EEDA	Encourage efficient patterns of movement to support economic growth
H1/H2/H3	<p>Outlines:</p> <ol style="list-style-type: none"> 1. The amount of new housing required in each District (South Norfolk 11,200 up to 2021) 2. Proposed amounts and types of affordable housing across the Region 3. Need to phase new housing development to give priority to previously developed land 4. Importance of linking infrastructure provision to rate of new development 	<p>Primarily District-wide housing completion statistics, split by brownfield/ greenfield.</p> <p>Housing trajectories</p>	<p>Need to consider Urban Capacity Studies outcomes in allocations.</p> <p>Reconciliation of local housing needs studies to regional approach.</p> <p>Important to match future infrastructure to needs arising from new developments.</p>	<p>Provide everybody with the opportunity of a decent home</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Reduce the effect of traffic on the environment</p>
Transport	<p>Main objectives for the Regional Transport Strategy (RTS) are to:</p> <ul style="list-style-type: none"> • Improve opportunities to access jobs, services and leisure/tourist facilities. • Enable infrastructure programmes and transport service provision to support both existing development and that proposed in the spatial strategy. • Reduce the need to travel • Reduce the transport intensity of economic activity, including freight. • Minimise the environmental impact of transport provision and travel, protecting and enhancing the natural, built and historic environment • Improve safety and security. 			<p>Reduce the effect of traffic on the environment</p> <p>Improve accessibility to essential services and facilities.</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p>

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ENV2	Local authorities will provide the strongest levels of protection for the East of England's finest landscapes. <ul style="list-style-type: none"> Development should respect and enhance local landscape character wherever possible, and provide mitigation measures when damage is unavoidable. New development should minimise damage to biodiversity of the region Local Authorities to develop policies that encourage an increase in woodland cover which respects local landscape character. 		LDDs to contain criteria based policies informed by landscape character assessments to ensure development respects local landscape character.	Maintain and enhance the distinctiveness and quality of landscapes. Maintain and enhance biodiversity, geodiversity, flora and fauna
ENV3/4	<ul style="list-style-type: none"> Ensure internationally and nationally designated sites are given the strongest levels of protection. Minimise damage to biodiversity and earth heritage resources. Increase woodland cover Protect ancient and important woodlands 		Policies in LDDs to protect and enhance internationally and nationally designated sites, biodiversity and earth heritage and woodlands.	Maintain and enhance the distinctiveness and quality of landscapes maintain and enhance biodiversity, geodiversity, flora and fauna
ENV5	Protect and enhance historic environment of the region		LDDs will identify, protect, conserve and enhance the historic environment of the region, its archaeology, Listed Buildings and historic landscapes.	Conserve, and where appropriate enhance the historic and archaeological environment
ENV6	Protect agriculture, land and soils		Policies required to support agri-environment schemes, encourage sustainable use of soil and water resources.	Conserve the quality and quantity of soil resource Provide for sustainable use and sources of water supply
ENV7	Ensure new development does not exacerbate problems with air quality Reduce or reverse growth of motor traffic.		Policies should seek to reduce or reverse the growth of motor traffic.	Improve air quality

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			Development strategy	
ENV8	Promote and encourage energy efficiency in new developments	Reduce CO2 emissions in line with targets in Energy White Paper	Policy to utilise sustainable construction, CHP and energy efficiency schemes in new developments. Provide 10% of development schemes energy from renewable resources.	Maximise the use of renewable energy solutions and reduce contributions to climate change Reduce vulnerability to climate change
ENV9	Ensure development does not exceed water supply		Protect water resources Development planned to ensure sustainable provision of water supply	Provide for sustainable use and sources of water supply
C1	Taking account of the Regional Cultural Strategy		LDDs to take account of Regional Cultural Strategy.	Improve education and skills of the population overall Encourage local community identity, good behaviour and co-operative attitudes
C2	Provision and location of leisure, sport, recreation arts or tourism facilities		Policy in LDDs outlining the sequential approach to locating development	Improve accessibility to essential services and facilities Maintenance and improvement of health of the population
C3	Encourage arts to promote social inclusion and community cohesion		Encouragement of arts through design	Encourage local community identity, good

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			statements	behaviour and co-operative attitudes
C4	Encouragement of appropriate sport and leisure facilities to satisfy local needs		Policy in LDDs to set out criteria for location of sport and leisure facilities	Maintenance and improvement of the health of the population Encourage local community identity, good behaviour and co-operative attitudes
C5	Encouragement of appropriate informal recreation		Policy in LDDs setting out criteria based approach	Maintain and enhance the distinctiveness and quality of landscapes Maintain and enhance biodiversity, geodiversity, flora and fauna Maintenance and improvement of the health of the population Encourage local community identity, good behaviour and co-operative attitudes
East of England Regional Social Strategy (2004)	Sets out the vision, objectives and means for achieving a fair and inclusive society in the East of England. Aims to develop a common definition of social exclusion and to support and focus regional and local action for tackling social exclusion			
East of England Regional Waste Management Strategy (2002)	Gives guidance on the land use planning aspects of waste management. The Strategy provides the context for Waste Local Plans and LDDs, guides waste collection and disposal plan and informs and influences private sector waste management activities			

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Integrated Regional Strategy 'Sustainable Futures' (EERA 2005)	<p>With a vision 'to improve the quality of life for everyone who lives or works in the East of England', the IRS will provide a joined-up framework to drive forward the many priorities for the Region held by public bodies.</p> <p>IRS priorities for the Region include:</p> <ul style="list-style-type: none"> 1 - Achieving high quality and sustainable solutions in areas facing growth and regeneration pressures. 2 - Harness strengths in science, research and development. 3 - Address persistent deprivation and social exclusion. 4 - Use and manage resources and environmental assets efficiently. 5 - Sustainable management of the Region's transport infrastructure. 		LDDs should also work towards integrated policy that strives to meet the priorities for the Region and promote sustainable development.	Implications across SA.
'Our Environment, Our Future' – East of England Regional Environmental Strategy (2003)	<p>Accommodate population and economic growth whilst protecting and enhancing the environment.</p> <p>Reduce the need to travel</p> <p>Deliver sustainable design</p> <p>Reduce vulnerability of region to climate change</p> <p>Promote energy conservation</p> <p>Harness environmental benefits arising from climate change</p> <p>Deliver sustainable agriculture</p> <p>Promote environmental economy</p> <p>Maintain and strengthen landscape and townscape character.</p> <p>Enhance biodiversity</p> <p>Conserve and enhance the historic environment</p> <p>Reduce the regions environmental impact</p> <p>Increase understanding of environmental issues.</p>		Requirements for policies in LDDs to address key objectives of Regional Environment Strategy.	Ensure that sustainability Appraisal objectives address the objectives of the Regional Environment Strategy.
Regional Economic Strategy for the East of England 'Progressing a	<p>Skills base that can support a world-class economy.</p> <p>Growing competitiveness, productivity and entrepreneurship</p>		Policies and development strategy of LDDs to contribute towards	Achieving the objectives of the Regional Economic Strategy may

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Shared Vision'	Global leadership in developing and realising innovation in science, technology and research. High quality places to work and live Social inclusion and broad participation in the Regional economy. Development of international gateways and national and regional transport corridors. Leading information society Exemplar in environmental technologies and the efficient use of resources.		meeting the objectives of the Regional Economic Strategy.	compromise other sustainability objectives. This is particularly in light of issues of sustainable transport and the protection of South Norfolk's environment.
Regional Housing Strategy for the East of England: Strategy Document 2005-2010 (2005)	Overall vision to 'ensure everyone can live in a decent home which meets their needs, at a price they can afford and in locations that are sustainable'			
Regional Planning Guidance for East Anglia (2000)	Sets the regional framework for development plans in East Anglia in the period to 2016. Outlines a vision for East Anglia where: <ul style="list-style-type: none"> • economic opportunities are maintained and improved • increasing social equality for all areas • environment is protected and enhanced whilst the distinctiveness of each locality is maintained • natural resource are conserved 		Regional issues of underlying importance to LDD preparation	Implications across SA
Sustainable Communities in the East of England (2003)	Sets out proposals for maintaining and creating sustainable communities in the East of England. It focuses particularly on actions to address housing, planning and neighbourhood renewal issues		Sustainability issues of underlying importance to LDD preparation	Implications across SA
Sustainable Tourism Strategy for the East of England (2004)	To guide tourism interests in the East of England. The strategy will guide investment decisions to pursue tourism goals in the Regional Economic Strategy.		To develop policies which promote sustainable tourism	Economic and environmental implications for SA
County				
Municipal Waste Strategy for Norfolk	Provides a framework for planning and implementing changes in how waste in Norfolk is			Minimise the production of waste

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(2002)	<p>managed</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Reducing growth in waste quantities • Meeting the statutory recycling and composting standards • Reducing the amount of waste disposed to landfill • Meeting the Local Public Service Agreement <p>Objectives:</p> <ul style="list-style-type: none"> • To reduce growth in household waste • To increase recycling and composting of waste • To progressively increase the recovery of waste consistent with the national targets • To deliver an efficient, effective and affordable waste management service that has public support • To encourage investigation and adoption of new and innovative technologies <p>The Strategy also includes a recycling plan for South Norfolk setting out plans for increasing recycling and composting.</p>			
Norfolk Ambition – The Community Strategy for Norfolk 2003 - 2023	<ul style="list-style-type: none"> • All individuals have the opportunity of a good quality of life. • People enjoy healthy lifestyles and have access to high standards of health and social care. • People in communities feel safe. • There is excellent educational attainment and opportunities for learning at all stages throughout life. • Individuals from all backgrounds can play an active part in community life. • The high quality environment is respected and enhanced for everyone's enjoyment and is matched by a strong reputation for renewable energies. 	Various indicators covering topic areas including Inclusive and Diverse, Healthy and Well, Safe, Knowledgeable and Skilled, Active and Engaged, Environmentally Responsible, Creative, Economically Thriving and Accessible and Well Housed.	Direct implications are limited although there is a more direct relationship between economic and housing related objectives and what the LDF can influence or achieve.	<p>Improve the quality of where people live</p> <p>Maintenance and improvement of the health of the population</p> <p>Improve accessibility to essential services and facilities</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p>

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	<ul style="list-style-type: none"> • Culture, creativity and spirituality are valued. • There is a distinctive economy characterised by innovative and dynamic businesses. • The communications infrastructure meets the needs of a forward-looking county. 			<p>Maximise the use of renewable energy solutions and reduce contributions to climate change</p> <p>Reduce vulnerability to climate change</p> <p>Improve education and skills of population.</p>
Norfolk Biodiversity Action Plan (2004)	Looks at Biodiversity in Norfolk, what it is, why its important and what is being done to help conserve species and habitats in Norfolk. Contains a number of individual Habitat and Species Action Plans		To develop policies which promote biodiversity	Maintain and enhance biodiversity, geodiversity, flora and fauna
Norfolk Biodiversity SPG	<p>The Norfolk Biodiversity SPG provides biodiversity principles. These state that</p> <ul style="list-style-type: none"> • Development should not lead to a loss of biodiversity and ideally should enhance it. • Important habitats and species should be protected from harmful development. • Any adverse effects should be avoided, minimised and/or compensated, and every opportunity should also be taken to create improvement for biodiversity, so making a significant contribution to the achievement of national, regional, and local biodiversity targets. • Ecological systems must be recognised as being highly complex and influenced by a very wide range of interacting and dynamic factors and processes. 			<p>To protect and enhance biodiversity</p> <p>To avoid, minimise and/or compensate any adverse effects.</p>
'Norfolk Live' A Cultural Strategy for Norfolk 2005-2010	<ul style="list-style-type: none"> • There are a number of objectives concerned with improving the cultural diversity of Norfolk. These concentrate on community participation, promoting cultural and recreational activities, skills development and access for all. 	No relevant targets or indicators	There are no direct implications for policies or proposals	Encourage local community identity, good behaviour and co-operative attitudes

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				<p>Improve education and skills of population</p> <p>Offer opportunities for all sections of the population to have rewarding and satisfying employment</p>
Norfolk Local Transport Plan 2001/02 – 2005/06				
Walking and Equestrian Issues	<ul style="list-style-type: none"> Development of a comprehensive network of safe and convenient routes linking local facilities 	<p>Percentage of people walking to key destinations</p> <p>Reduction in pedestrian casualties</p> <p>Improve public perception of safety</p> <p>Develop a school travel strategy</p>	Implications for policies to provide a pedestrian network	<p>Maintenance and improvement of the health of the population</p> <p>Reduce effect of traffic on the environment</p> <p>Improve accessibility to essential services and facilities</p>
Cycling	<ul style="list-style-type: none"> A strategic network of cycle routes 	Trips by bike to quadruple by 2012	Implications for policies to provide a cycle network	<p>Maintenance and improvement of the health of the population</p> <p>Improve accessibility to essential services and facilities</p> <p>Reduce effect of traffic on the environment</p>
Public Transport	<ul style="list-style-type: none"> The provision of infrastructure to give public transport advantages over cars in terms of journey times, quality and convenience. 	Increase level of patronage on subsidised services by 1%	Implications for policies to assist with measures to give public transport advantages over cars	Reduce the effect of traffic on the environment

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Private Cars/Managing Demand	<ul style="list-style-type: none"> To reduce trips by non-essential motor vehicles through demand management measures 		Implications for policies and proposals	Reduce the effect of traffic on the environment
Safer and Healthier Journeys to Schools	<ul style="list-style-type: none"> To improve health and safety of school children and reduce car use by achieving a modal shift away from the private car on the school run. 		Implications for policies and proposals	<p>Reduce the effect of traffic on the environment</p> <p>Maintenance and improvement of the health of the population</p>
Reducing the Need to Travel	<ul style="list-style-type: none"> To reducing the need to travel by the integration of land use and transport policies. 		Implications for policies and proposals	<p>Reduce the effect of traffic on the environment</p> <p>To improve accessibility to essential services and facilities</p>
Access for Everyone	<ul style="list-style-type: none"> To ensure access to public transport facilities for all sections of the community. 		Implications for policies and proposals	Improve accessibility to essential services and facilities, including to those most in need
An Inclusive Transport System	<ul style="list-style-type: none"> To allow everyone access to essential and non-essential facilities. 		Implications for policies and proposals	Improve accessibility to essential services and facilities, including to those most in need
Air Quality, Noise and Climate Change	<ul style="list-style-type: none"> To meet the Government's targets for local air quality management and climate change. 	To cut greenhouse gas emissions by 12.5% on 1990 levels by 2008 to 2012	Implications for policies and proposals	<p>Reduce the effect of traffic on the environment</p> <p>Improve air quality</p>
The Natural and Built Environment	<ul style="list-style-type: none"> The integration of environmental policies into all transport solutions 	95% of road materials to be recycled by 2005	Implications for policies and proposals	Reduce the effect of traffic on the environment

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Sustainable Distribution	<ul style="list-style-type: none"> To improve the efficiency and environmental impact of distribution and to increase the modal share of rail and water for the movement of freight and to integrate air transport with other modes 		Implications for policies and proposals	Encourage efficient patterns of movement to support economic growth
Rural Area Strategy - Objective 1	<ul style="list-style-type: none"> Support an efficient economy and sustainable economic growth in the market towns and rural areas of Norfolk 		Implications for policies and proposals	<p>Encourage sustained economic growth</p> <p>Improve accessibility to essential services and facilities</p>
Objective 2	<ul style="list-style-type: none"> Minimise the impact of traffic on the area to: increase safety, and peoples' perceptions of safety, conserve and enhance the built and natural environment and retain the special characteristics of rural areas 		Implications for policies and proposals	<p>Reduce the effect of traffic on the environment</p> <p>Maintain and enhance the quality of landscapes and townscapes</p>
Objective 3	<ul style="list-style-type: none"> Reduce the social exclusion of people living in the rural areas 		Implications for policies and proposals	Reduce poverty and social exclusion
Objective 4	<ul style="list-style-type: none"> Improve opportunities for access to facilities for all sections of the community by developing sustainable transport measures, in particular public and community transport and facilities for cyclists and pedestrians 		Implications for policies and proposals	<p>Improve accessibility to essential services and facilities</p> <p>Encourage local community identity, good behaviour and co-operative behaviour</p> <p>Maintenance and improvement of the health of the population</p>
Objective 5	<ul style="list-style-type: none"> To promote the integration of transport and land use planning to include the consideration through whole settlement strategies of the 		Implications for policies and proposals	Improve accessibility to essential services and facilities

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	individual needs of each market town in relation to its development and transport needs and in the context of its hinterland			
Norfolk Minerals Local Plan (2004)	Deals with Minerals planning across Norfolk. The main functions of the Plan are: <ul style="list-style-type: none"> To develop Structure Plan policies and apply them to land uses in local areas To establish a clear and comprehensive basis for co-ordinating and controlling mineral workings and related development To provide an opportunity for the public to express their views 		Minerals are a 'county matter', but their extraction will have environmental and economic impacts.	Contribute to the economy of the area, but also environmental effects.
Norfolk Residential Design Guide (1998)	<ul style="list-style-type: none"> There are various objectives aiming to improve residential development particularly in terms of design and access by non-car modes for the benefit of residents and others living nearby. 		Limited direct implications mostly in accordance with those associated with planning good practice and guidance (principally PPS1, PPG3 & PPG13)	<p>Reduce the effect of traffic on the environment</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Conserve, and where appropriate enhance the historic environment</p> <p>Improve the quality of where people live.</p>
Norfolk State of the Environment Report (2003)	Provides a summary of available information about Norfolk's environment in 2003. The Report consists of a number of resource based topics relevant to structure plan policies. Where comparable, data is available then positive or negative trends are identified.		To develop policies which promote the environment of Norfolk	Environmental implications for SA
Norfolk Structure Plan 1999 (Saved Policies)				
CS.3 Locational Strategy	<ul style="list-style-type: none"> The town of Diss will provide for housing, 		Implications for allocation	Encourage efficient

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	employment and commercial development on a scale to support its function as a rural centre		of land for both employment, commercial uses and housing	<p>patterns of movement to support economic growth</p> <p>Improve accessibility to essential services and facilities</p> <p>To improve economic performance in rural areas</p>
EC.2 Main Settlements	<ul style="list-style-type: none"> The Norwich Policy Area will be one of the locations for major economic development. Economic development will also be encouraged in Diss, Harleston and Loddon to improve the balance between jobs and people. 		Implications for the location for economic development	<p>Encourage sustained economic growth</p> <p>Encourage efficient patterns of movement to support economic growth</p> <p>Improve accessibility to essential services and facilities.</p> <p>Provide opportunities for all section of the population to have rewarding and satisfying employment</p> <p>Improve economic performance in rural areas</p>
EC.6 Rural Areas	<ul style="list-style-type: none"> Economic development in rural areas will be subject to criteria that seek to protect the countryside and prime agricultural land. 		Implications for Rural areas to be protected from economic development that does not need to be located there	<p>Encourage efficient patterns of movement to support economic growth.</p> <p>To maintain and enhance</p>

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			there.	<p>the distinctiveness and quality of landscapes</p> <p>To maintain and enhance biodiversity, geodiversity, flora and fauna</p> <p>To conserve the quality and quantity of soil resources</p>
ENV.13 Historic Buildings, archaeology and the historic landscape	<ul style="list-style-type: none"> The quality and local distinctiveness of the historic urban and rural environment will be maintained and improved in accordance with criteria. 		Implications for enhancement of historic environments	<p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Conserve, and where appropriate enhance the historic environment</p>
T.3 Parking Provision	<ul style="list-style-type: none"> Parking policies will be developed across the county on a consistent basis taking account of the needs of residents, disabled people and operational requirements. 		Implications for a county-wide approach to parking standards	Improve accessibility to essential services and facilities , including to those most in need
T.5 Public Transport	<ul style="list-style-type: none"> A modal shift from private car to public transport will be encouraged by way of criteria 		Implications for policies. Proposals that conflict with the aim of reducing the need to travel will not be permitted.	Reduce the effect of traffic on the environment
T.10 Strategic Road Network	<ul style="list-style-type: none"> Through traffic will be encouraged to use the strategic road network 		Implications for policies to control access onto the strategic road network	<p>Reduce the effect of traffic on the environment</p> <p>Encourage efficient patterns of movement to support economic growth</p>

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T.11 Corridors of movement	<ul style="list-style-type: none"> Protection of corridors of movement for their traffic carrying capacity. 		Implications for policies to control access onto corridors of movement.	Reduce the effect of traffic on the environment
TCR.1/2/3 Town centres and retail development	<ul style="list-style-type: none"> The retail hierarchy of settlements is set out and guidance for assessing proposals is given. 		Implications for policies to control retail and other town centre use development.	Improve accessibility to essential services and facilities
H.8 Housing in rural areas	<ul style="list-style-type: none"> Housing in rural areas will only be acceptable in specific circumstances 		Implications for policies to control development of rural housing.	<p>Provide everybody with the opportunity of a decent home</p> <p>To maintain and enhance the distinctiveness and quality of landscapes</p>
H.10 Gypsy sites	<ul style="list-style-type: none"> Gypsy sites should be provided within reasonable reach of local services 		Implications for policies dealing with provision of Gypsies sites.	<p>Reduce poverty and social exclusion</p> <p>Improve accessibility to essential services and facilities, including to those most in need</p>
N.14 Norwich Policy Area - Housing	<ul style="list-style-type: none"> A 5 year supply of housing land to be maintained for the Norwich Policy Area as a whole 		LDD to maintain 5 year housing supply	Provide everybody with the opportunity of a decent home
Norfolk Waste Local Plan (2000)	<p>Main objectives:</p> <ul style="list-style-type: none"> Move the treatment and management of waste higher up the waste hierarchy and encourage reduction, re-use, recycling Ensure waste is recovered or disposed of without endangering human health or harming the environment Make suitable provision for the management of waste in the County Safeguard waste management sites from 			Minimise the production of waste

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	<p>incompatible development</p> <ul style="list-style-type: none"> • Provide effective planning control over waste management facilities • Ensure regional self sufficiency 			
Shaping the Future – Towards a Social Cohesion Strategy for Norfolk (2000)	There are a number of objectives concerned with improving the economic performance of Norfolk. These concentrate on economic growth, employment, business creation and skills development.	<p>Raise the annual average rate of growth over the period 2000 – 2010 from 2.3% to 2.8%. Create by 2010 an additional 7,500 jobs. For unemployment in Norfolk to be no higher than the mid-point between the East of England and the UK as a whole. For business creation to achieving a mid-point between the East of England and England. 47% Adult achievement in NVQ level 3 qualifications as a percentage of the working age population.</p>	Implications for LDD relate to implications from RSS/RES in terms of economic development and job growth.	<p>Encourage sustained economic growth</p> <p>Improve education and skills of population</p> <p>Offer opportunities for all sections of the population to have rewarding and satisfying employment</p> <p>Encourage and accommodate both indigenous and inward investment</p>
River catchment				
Broadland Rivers Catchment Flood Management Plan (CFMP)	<p>The aims of Catchment Flood Management Planning are to set the overall direction of flood risk management at the catchment scale. They represent long term aspirational targets that are not necessarily deliverable within the life of a single CFMP. The aims are:</p> <ul style="list-style-type: none"> • To reduce the risk of flooding and harm to people, the natural, historic and built environment caused by floods; 		To ensure development is not located in flood risk areas or does not increase the risk of flooding to people, the natural, historic and built environment.	<p>To maximise the use of renewable energy solutions and reduce contributions to climate change (decision-making criteria – to reduce the risk of flooding) To reduce vulnerability</p>

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	<ul style="list-style-type: none"> To maximise opportunities to work with natural processes and to provide multiple benefits from flood risk management, and make an effective contribution to sustainable development; To support the implementation of EU directives, the provision of Government and other stakeholder policies and targets, and the Environment Vision; To promote sustainable flood risk management; To inform and support planning policies, statutory land use plans and implementation of the Water Framework Directive. 			to climate change.
Broadland Rivers Catchment Abstraction Management Strategy (Environment Agency, 2006)	The Broadland Rivers CAMS sets out a strategy to manage water resources sustainably over the next six years in the Broadland rivers catchments. The document provides guidance for existing abstractors and new applicants setting out how water will be managed to ensure that it is available for abstraction whilst protecting the needs of the natural environment.		To ensure water supply can meet development demand whilst protecting the needs of the local environment.	To provide for sustainable use and sources of water supply.
District				
Crime Reduction Strategy (2003)	<p>The South Norfolk Crime Reduction Strategy is built around action plans to tackle the four priorities and several crosscutting themes.</p> <p>Strategic Priorities</p> <p>Burglary</p> <p>Vehicle-related crime</p> <p>Crimes of violence: Public and Domestic</p> <p>Partnership give strategic importance to violent crime and disorder. As the issues surrounding domestic violence differ from violent crime in general these were given distinct priority status.</p>		Need for early liaison with Police. Identify patterns of crime and links to physical environments.	<p>Improve the quality of where people live</p> <p>Reduce anti-social activity</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p>

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Corporate Equality Plan (2003)	AIMING FOR EQUALITY OF OPPORTUNITY “Putting People First” means ensuring that the views and priorities of all citizens are reflected in South Norfolk Council policies. We aim to ensure that equality is included in the day-to-day work we carry out in delivering services and in our role as an employer. To achieve that the Council will <ul style="list-style-type: none">• Make our services and information about them accessible to all• Ensure, where appropriate, that we work in partnership with others to deliver equality• Meet our statutory requirements• Ensure that employees are treated fairly Ensure that our policy development and planning processes recognise the vital importance of equalities				LDD documents to reflect equalities issues	To reduce poverty and social exclusion
Economic Development Strategy (2004)	The Vision for 2009 for South Norfolk’s Economy is: “To be an area where economic opportunity and development is diverse, sustainable and accessible to all the community.”					
	Objectives	Key Actions	Measures of Success 2009			

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	Stimulate the creation and retention of all employment in South Norfolk	<p>1. By helping existing enterprises, expand, innovate or diversity.</p> <p>2. By increasing enterprise formation and survival, developing entrepreneurship</p> <p>3. By the promotion and encouragement of appropriate economic investment across the district</p>	<p>M1. Business Survival Rates at 5% above regional averages (3%-2001)</p> <p>M2. Increased Average Wage rates, within 2% of national averages (within 4.1% 2002)</p> <p>M3. Annual change in number of local full time jobs (+2.6% in 2001)</p>		Need to address economic development, allowing for new developments	<p>Encourage sustained economic growth</p> <p>Encourage and accommodate both indigenous and inward investment</p>

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	Raise learning expectations and achievements, meeting the needs of the economy	<p>1. By increasing investment in training by enterprises, to promote quality employment</p> <p>2. By widening access to learning, increasing participation through innovative provision</p> <p>3. By encouraging post-16 learning opportunities and raising basic skills levels.</p>	<p>M4. Increase participation levels in 16+ learning to a level 10% above Norfolk (7% in 2002)</p> <p>M5. Basic Skills attainment, 7% better than average Norfolk levels (3.8% 2001)</p>		Need to consider accessibility issues.	<p>Offer opportunities for all sections of the population to have rewarding and satisfying employment</p> <p>To improve the education and skills of the population</p>

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	Break down the barriers to economic success in rural areas	1. By identifying needs by helping communities carry out Health checks and Parish Plans, then acting on their results. 2. By improving routes into economic activity	M6. All communities wishing to, have participated in a parish planning exercise M7. 86% of people of working age in employment (2002-82.7%) M8. 80% of parishes have undertaken improvement projects as a result of undertaking a Parish Plan		Particular need to consider effects on rural communities.	Offer opportunities for all sections of the population to have rewarding and satisfying employment To improve the education and skills of the population
Empty Homes Strategy (2003)	Empty Homes Strategy objectives and targets Bringing empty homes back into productive use for the benefit of South Norfolk's residents will assist in <ul style="list-style-type: none"> Contributing to a reduction in the number of unfit dwellings Contributing to the revitalisation of market towns Increasing the supply of affordable housing Increasing the provision of rented properties for those without homes 				No obvious implications for LDD policy	Reduce poverty and social exclusion Provide everybody with the opportunity of a decent home Improve the quality of where people live
Corporate Environment Strategy (Initial Draft 2005)	A draft strategy very much in the early stages of formulation: This will be the first environment strategy produced by the Council. It is being developed to highlight the main environmental issues affecting the whole District and to help identify the role that South Norfolk Council can play to minimise its own impact on the environment,					Reduce the effect of traffic on the environment To improve air quality Maintain and enhance biodiversity, geodiversity,

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	<p>7 key policy areas will form the basis of the strategy:</p> <ul style="list-style-type: none"> • The use of natural resources and energy consumption • Transport • Air, land and water quality • Biodiversity • The built and urban environment • Waste management <p>Managing the Council's environmental impact</p>			<p>flora and fauna</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Maximise the use of renewable energy sources and reduce contributions to climate change</p> <p>Reduce vulnerability to climate change</p> <p>Provide for sustainable use and sources of water supply</p> <p>Minimise production of waste</p>
Health Strategy (Initial Draft 2005)	<p>A draft Strategy very much in the early stages of formulation:</p> <p>Study will identify areas of special health need eg. Diss and Costessey and will suggest that resource location should follow the identified need.</p> <p>Main aims:</p> <ul style="list-style-type: none"> • To improve the health and well being of the whole population of South Norfolk • To improve the health and well being of those most in need by reducing health inequalities using a targeted approach 		Policy context needs to look at health need rather than just economic need	Maintenance and improvement of the health of the population
Housing Strategy (2004)	Strategic Housing Vision for South Norfolk Council:		Various implications for	Reduce poverty and

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	<p>to ensure that sufficient, good quality and affordable housing is available to meet the needs of people in South Norfolk.</p> <p>Issue Problem</p> <p>1. To ensure that housing in South Norfolk, in all tenures, is of a standard suitable for modern day living, contributes to good health, and is energy efficient.</p> <p>The private sector requires £187 million help to improve its condition</p> <p>Many owners will need help from the Council. With limited resources, the Council must prioritize.</p> <p>The former council stock is not up to the standard which the Council and tenants expect.</p> <p>£190 million is needed over 30 years to improve and maintain it. South Norfolk Housing Partnership must deliver this.</p> <p>2. To maximise the provision of affordable housing through partnership working, and ensure an appropriate mix by type, size, tenure and location.</p> <p>More people find they cannot afford to enter the property market.</p> <p>There is great housing stress, with increasing homelessness. The Council needs to act to increase the supply of affordable housing, but resources are scarce.</p> <p>There will be a severe shortage of social rented housing, especially for families, during 2004 and</p>		<p>housing policies, particularly the provision of affordable housing in sustainable locations</p>	<p>social exclusion</p> <p>Maintenance and improvement of the health of the population</p> <p>Provide everybody with the opportunity to live in a decent home</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p> <p>Improve the quality of where people live</p> <p>Maximise the use of renewable energy and reduce contributions to climate change</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>2005</p> <p>Action is needed urgently to bridge this gap, until more become available through planning agreements.</p> <p>There is a shortage of affordable housing for newly-forming households.</p> <p>More small properties are required for rent and low cost ownership.</p> <p>3. To enable people to gain access to suitable accommodation; also to ensure adequate choice and support are available to meet need.</p> <p>There is an increasing need for support to enable people to live independently in the community.</p> <p>Supporting People funding is unlikely to increase to meet this need.</p> <p>4. To ensure that housing activity contributes to sustainability, social inclusion and quality of life, improving the economic, social and environmental well being of South Norfolk.</p> <p>Affordable housing is not always available where people want to live.</p> <p>Communities are becoming less sustainable - new households have to move away from family and other social networks.</p>			
South Norfolk Council Landscape Assessment, Evaluation and Guidance (2000)	<ul style="list-style-type: none"> The landscapes types within South Norfolk will be protected for their own value. 		Develop a suite of policies that protect the qualities of the landscape characters identified from inappropriate development	<p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Maintain and enhance</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
			development. Ensure that the landscape character types are reproduced and development assessed within this context.	biodiversity, geodiversity, flora and fauna Conserve, and where appropriate enhance the historic environment Maximise the use of renewable energy solutions and reduce contributions to climate change Reduce vulnerability to climate change
Leisure/Culture & Countryside Strategy (2005 in preparation) (Draft)	<p>This strategy provides an opportunity to illustrate the significance and importance of South Norfolk, the role that Leisure, Cultural and Countryside services has at present and our emerging role in relation to the health and cultural enhancement of the area.</p> <p>The Strategy will be focused towards the achievement and improvement of health, well-being, creating a sense of place and community and steering the enhancement of our cultural identity.</p>		Need to ensure adequate provision of facilities and the protection and enhancement of the environment. Links to community development.	<p>Maintaining distinctiveness of the environment.</p> <p>Reduction in social exclusion.</p> <p>Accessibility to essential services.</p>
Local Agenda 21 Strategy (2000)	<p>Promote Economic Success</p> <ul style="list-style-type: none"> • Create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national or global environment • Value unpaid work <p>Meet Social Needs</p> <p>Protect human health and amenity through safe, clean, pleasant environments 1998/99</p> <p>Emphasis health service prevention action as well as care 65%</p>		Various issues to be reflected in LDD policy	<p>Maintenance and improvement of the health of the population</p> <p>Improve education and skills of the population</p> <p>Encourage local community identity, good behaviour and co-operative attitudes</p> <p>Offer opportunities for</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>65%</p> <p>Maximise everyone's access to the skills and knowledge £146 needed to play a full part in society</p> <p>Ensure access to good food, water, housing and fuel at a reasonable cost</p> <p>Encourage necessary access to facilities, services, goods and other people in ways which make less use of the car and minimise impacts on the environment</p> <p>Make opportunities for culture, leisure and recreation readily available to all</p> <p>Meet local needs locally wherever possible</p> <p>Create or enhance places, spaces and buildings that work well, wear well and look well</p> <ul style="list-style-type: none"> • Make settlements 'human' in scale and form • Value and protect diversity and local distinctiveness and strengthen local community and cultural identity <p>Protect and Enhance the Environment</p> <ul style="list-style-type: none"> • Use energy, water and other natural resources efficiently and with care • Minimise waste, then re-use or recover it through recycling, composting or energy recovery and finally dispose of what is left • Limit pollution to levels which do not damage natural systems • Value and protect the diversity of nature 			<p>all sections of the population to have rewarding and satisfying employment</p> <p>Improve the quality of where people live</p> <p>Accessibility to essential services and facilities</p> <p>Reduce effect of traffic on the environment</p> <p>Maintain and enhance biodiversity, geodiversity, flora and fauna</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>Provide for sustainable use and sources of water supply</p> <p>Minimise the production of waste</p>
South Norfolk Alliance Community Strategy (2004)	<p>Community Strategy 2004</p> <p>Our Vision:</p> <p>Working together, local people, local businesses, the voluntary sector and public bodies will strive to make South Norfolk:</p>		The LDD documents will closely follow the vision and objectives in the Core Strategy, there may be various policy implications	Has implications across all areas of SA

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<ul style="list-style-type: none"> • A place where a wide diversity of local people take the central role in making decisions about their community and its development and where the public services they receive are excellent and provide good value for money • A healthier and even safer place to live where the crime levels and 'fear of crime' are low • A place where suitable accommodation, support and care are available for all whatever their needs • An area of high learning expectations and achievement, meeting the needs of individuals and the economy • A place where the environment is protected and respected, quality housing is available to all and it is possible to travel around using varied forms of transport • An area where economic opportunity and development is diverse, sustainable, accessible and appropriate to the needs of all the community • An area that provides quality value for money, culture and leisure opportunities that improve the life and well being of residents and visitors <p>Our objectives are to:</p> <p>Homes and Housing:</p> <ul style="list-style-type: none"> • Increase, year on year, the number of affordable properties, including shared ownership homes built in South Norfolk, in order to eliminate homelessness and reduce the number of people in housing need. • Locate as many new homes as possible, whether in villages or towns or on large or small sites, in communities where people can reach a range of basic services, jobs and community support without being forced to use a car • Improve the quality of people's living environment by 			

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>achieving a high standard of design and efficient use of resources, including using products from sustainable sources in all housing developments.</p> <p>Development of the economy:</p> <ul style="list-style-type: none"> • Improve the availability of good quality jobs and the ability of local people to get them. Develop the economy in our rural villages and town centres. • Assist economic regeneration through the promotion of adult and community learning and vocational learning, to enhance the skills of the workforce in South Norfolk. <p>Transport and getting about:</p> <ul style="list-style-type: none"> • Increase the use of and to improve the provision of transport, providing an integrated public transport service. • Improve rural accessibility to jobs, services and facilities whilst reducing the adverse environmental impact of the car, giving residents greater opportunities to increase their local wealth and access to health care, cultural and learning opportunities. • Focus on increasing the number of people using community transport schemes (including schemes such as Diss and District Borderhoppa, Wymondham Flexi-bus and Car Link). <p>The environment:</p> <ul style="list-style-type: none"> • Make South Norfolk a place where carbon dioxide emissions are reduced and alternative methods of energy production are supported. • Implement our Local Agenda 21 action plan, which aims to improve quality of life using sustainable development to maintain the quality of our natural environment whilst delivering 			

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>social progress and economic growth.</p> <ul style="list-style-type: none"> • Protect South Norfolk's countryside landscape and the species and habitats that make it up. • Minimise waste and where waste is produced, ensure it is recycled to an increasing degree each year. <p>Community life:</p> <ul style="list-style-type: none"> • Improve access to jobs and services by locating most new development in locations which give people easy access to their essential needs, a choice of means of transport and the ability to reduce their need to travel. • Promote social inclusion and income maximisation amongst residents and to encourage the take up of benefits which people are entitled to. • Local people should have clear and meaningful opportunities to influence the development of their communities by working with development partnerships, tourist forums and other service providers and by producing a parish plan or village appraisal, to contribute to the planning Local Development Framework. <p>Crime and community safety:</p> <ul style="list-style-type: none"> • Work through the South Norfolk Crime and Disorder Reduction Partnership and its working groups, to reduce crime, disorder, anti social behaviour and fear of crime. • Eliminate anti-social behaviour in South Norfolk, knowing the effect it can have on peoples' lives. We will encourage reports and respond to them. • Improve safety and security in all construction developments, adhering to the secure by design guidelines. • Work with the Norfolk Casualty Reduction Partnership to improve road and fire safety to 			

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>reduce accidents.</p> <p>Health:</p> <ul style="list-style-type: none"> • Encourage user involvement in the provision of health and social care services. • Help people to take responsibility for their lifestyles and health, with good access to all healthcare requirements. • Encourage walking and cycling through the provision of safe and convenient routes and pedestrian / car-free areas, to help to reduce the need for car access and to improve individual's safety, fitness and health. • Work with the Norfolk and Waveney Mental Health Partnership to improve life for people suffering from mental health problems. • Develop initiatives to tackle health inequalities in South Norfolk, which are concerned with responding to the housing, poverty and access to educational needs of disadvantaged populations, in order to improve their quality of life and life expectancy. <p>Young people:</p> <ul style="list-style-type: none"> • In partnership with others, to work on tackling the key issues for young people living in South Norfolk. These include lack of transport and leisure facilities, which result in rural isolation, boredom and difficulty in accessing training. • To listen to young people and to provide young people with opportunities to engage positively in the democratic process. • To tackle rural isolation to help young people access the services they require. 			
South Norfolk Cycling Strategy (2005)	<p>The Main aims:</p> <ul style="list-style-type: none"> • To encourage cycling in support of the Government's aims 		Policies to encourage cycling and to provide for cyclists needs	Maintenance and improvement of the health of the population

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<ul style="list-style-type: none"> To maximise the use of cycling as a convenient, attractive, safe, healthy and secure means of transport and ensures its integration with other modes of transport To ensure that policies to encourage cycling and to provide for cyclists ' needs are integrated with the Community Strategy and Local Development Framework <p>Objectives:</p> <ul style="list-style-type: none"> To maximise the provision of convenient, safe and attractive cycle routes To provide for convenient, safe and secure cycle parking To integrate provisions for cycles with other forms of transport To raise public awareness and to encourage and publicise cycling To improve cyclists' safety To reduce cycle theft 			Reduce effect of traffic on the environment
Strategy for Gypsies and Travellers in Norfolk (2005-2008)	<p>The Vision for this Strategy is:</p> <p>A Norfolk where Gypsies and Travellers have equality of opportunity with other members of the community to enable them to access services provided by agencies working together in an inclusive, cohesive and transparent manner.</p> <p>The main areas of concern that are highlighted are:</p> <ul style="list-style-type: none"> The lack of suitable sites; The lack of information regarding Gypsies and Travellers in Norfolk; The knowledge that Gypsies and Travellers are often polarised from settled communities; The lack of understanding with regard to the culture and lifestyles of Gypsies and Travellers and the need 		Develop policies and proposals that address the identified need of Gypsy and Traveller communities in South Norfolk	<p>Reduce poverty and social exclusion</p> <p>Provide everybody with the opportunity of a decent home</p> <p>Encouraging community identity, good behaviour and co operative attitudes</p> <p>Improve accessibility to essential services and facilities including to those most in need</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>and lifestyles of Gypsies and Travellers and the need to work towards mutual respect in all aspects of our community base;</p> <ul style="list-style-type: none"> The difficulties that arise from being of a nomadic lifestyle, particularly in respect to accessing services such as housing, housing support, education and health services. 			
The Broads Plan	<p>The Broads Plan is the Management Plan for the Broads. It sets out a vision and long-term (20 year) aims for the future of the Broads, and short-term (5 year) objectives to be addressed during the lifetime of the supporting 5-year Action Plan.</p>			<p>To maintain and enhance biodiversity, flora and fauna</p> <p>To maintain and improve the health of the population overall</p> <p>To improve accessibility to essential services and facilities (including recreation opportunities).</p>
Tourism Strategy (2004)	<p>What we plan to achieve:</p> <ol style="list-style-type: none"> Income from tourism will be further increased. We will encourage more accommodation providers and attractions to meet quality standards with a series of initiatives The South Norfolk tourism profile will be improved to increase the number of visitors to the district Responding to the industry's requests, partners will promote schemes to extend the season, retain skills and encourage investment in the industry We will seek to involve all tourism partnerships and local communities in the marketing of destinations, events and themes in South Norfolk 		<p>Policies will need to reflect locations of tourist activities. Built and unbuilt environment is key factor.</p>	<p>Encourage sustained economic growth</p> <p>Maintain and enhance the distinctiveness and quality of landscapes and townscapes</p> <p>To conserve and where appropriate enhance the historic environment</p>

Document Title (Policy/ Para. No.)	Key objectives relevant to LDD and SA	Key Targets and Indicators	Implications for LDD	Implications for SA
	<p>6. We will seek to help local tourism businesses to promote and identify themselves to the general public</p> <p>Development of tourism in South Norfolk will enhance the natural and built environment</p>			
Towards Stronger Communities: South Norfolk's Strategy for Community Cohesion, Diversity, Social Inclusion and Participation (Draft 2005)	Contains a number of objectives concerned with strengthening community cohesion, celebrating diversity, encouraging tolerance and respect, promoting social inclusion and encouraging participation		Need to consider how the communities own perceptions are affected by planning issues e.g. affordable housing and role of younger people in villages.	Encourage local community identity, good behaviour and co-operative attitudes

Appendix 4

**Baseline information presented by South Norfolk Council and
information on local County Wildlife Sites**

CHARACTER OF THE DISTRICT

1. The characterisation set out below has been determined from a number of sources:
 - Baseline assessment
 - Review of plans and programmes as listed in Appendix 2
 - Results of extensive consultation carried out to inform the South Norfolk Alliances – Community Strategy in 2003/04.
2. These sources also identify a number of key sustainability issues.

Key points

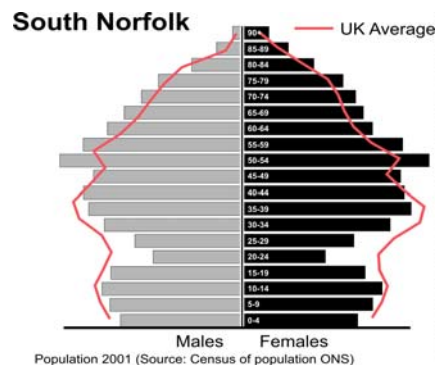
- South Norfolk is mainly rural, although it is influenced by Norwich to the north
- The population is ageing, with the number of those over 65 expected to increase substantially
- The population is generally healthy
- The economy is buoyant, especially in the services sector
- Deprivation is a serious issue in only a few wards, although isolation is a problem
- House prices have risen rapidly in the last four years
- The stock is generally newer than the English average
- 85% of homes in South Norfolk are detached or semi-detached houses
- South Norfolk enjoys the benefit of many natural environmental assets and a varied landscape and contains a rich built heritage comprising some 3,500 listed buildings.

Population

3. South Norfolk District has a population of 114 300 (NCC estimate 2004), of whom about 35% live in rural locations whilst the remainder live in the main market towns of Wymondham, Diss and Harleston or on the fringes of Norwich at Costessey. With this population in a large area (906 sq km/350 sq miles), the average population density is only 1.2 people per hectare, compared with 3.4 for England and Wales.
 4. The graph in Figure 3 compares the population profile of South Norfolk with the national average at 2001.
 5. The most significant aspects of population data are:
 - The number of older people exceeds the national average and will increase
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- The 50 - 59 age group is substantially bigger than the national average. This is a potential problem for the second quarter of the century when they are aged over 80.
- The number of people between 20 and 29 is much lower than the national average.

Figure 3: Demographic profile of 2001 population (Source: Census of Population ONS)



- Over the last 10 years, there have been significant population changes that have implications for services in South Norfolk. For example, although small in number, there has been an 81% rise in the last 10 years in the number of 90 or 90+ people who live in the District (481 to 869). Of more significance is the increase in the 50 - 54 age group where we have seen an increase of 48%. For each of the age ranges above the age of 45 there is a percentage increase above the overall percentage increase in the District. In contrast, between 1991 and 2001 there have been reductions in the younger age groups: 15 -19 down 5.5%, 20 – 24 down 30.6% and 25 - 29 down 16.1%.

Ethnic profile

- The ethnic profile shows that only 1.1% of the population is non-white, which means there are some groups that are particularly 'hard to reach', serve or engage in development decisions, an issue that we are addressing through our review of access to services and information. The largest majority ethnic group is Chinese (0.2%). Although only some comprise a distinct ethnic group, Travellers form a significant minority in South Norfolk.

Health and Education

- The residents of South Norfolk are some of the healthiest in the country. If present trends continue, South Norfolk is the only district in Norfolk expected to achieve all 4 Our Healthier Nation targets by 2010. Educational achievement is higher than the national average, with over 65.8% of 15 yr olds achieving 5 or more grades A*- C compared to 50% nationally.

Crime

9. Crime levels in South Norfolk are low and are certainly lower than the national averages. Fear of crime is also relatively low.

Employment

10. The economy in the Greater Norwich area is generally buoyant, and South Norfolk has benefited from this. The percentage of people who are employed is 64.1%, higher than the Norfolk average of 60.4%. The key employment sectors are retail, health (particularly for women), and manufacturing, especially of automotive and electrical parts.
11. The unemployment rate of 2.4% (March 2005) is low when compared with the national average of 4.5%. However, average adult earnings are only 85% of the national average earnings and a third of the workforce has no qualifications. The majority of employers are small, with only 5% employing more than 25 people.
12. The District is heavily influenced by the City of Norwich, on the northern edge of the District, where over 50% of South Norfolk's employed people work. This is the focus for much of the local transport network, and most of South Norfolk lies within its travel-to-work area. Norwich is the location for much of the industry, commerce, education and leisure activity for this part of Norfolk, which also creates a social attraction, with many South Norfolk residents (especially the young) moving to the city.
13. In the south of the District most of the land is used for agriculture and food related industry, giving this sector great influence despite employing only 15% of the workforce. The District attracts a significant number of tourists, with 2.7 million day visits per year.
14. According to the Annual Business Inquiry of the Office of National Statistics, the main employment sectors in South Norfolk are: distribution, hotels and catering (24.6%); public administration, education and health (20.7%); banking, finance and insurance (15.5%); and manufacturing (13.9%). Despite the rural nature of the district, agriculture and fishing account for only 6% of employment. Within South Norfolk, the biggest employers are Norfolk and Norwich University Hospital, Lotus Cars (Wymondham) and those on the Norwich Research Park at Colney (adjacent to the University of East Anglia). Many of those employed in banking, finance and insurance work for Norwich Union in Norwich.
15. Employment in Norfolk is expected to grow by 9% between 2000 and 2010. Most growth is anticipated in the following sectors: hotel and catering; banking and insurance; other financial services; business sectors; and retailing. As part of this countrywide picture, it is clear that the economy of South Norfolk is moving from traditional agriculture and industry to an office based economy.

Deprivation

16. For a predominantly rural setting, South Norfolk is a relatively affluent area, and does not have the significant issues of unemployment or deprivation of more urban areas.
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Some residents do experience issues associated with low income (at or towards the national minimum wage), and obtaining access to services, especially in the more remote parts of the district.

17. The area is not ranked highly in the Government's official Index of Deprivation (ranking 291 out of 354), although some pockets of deprivation exist and the District's rural character gives problems of rural sustainability and accessibility.
18. The Index of Deprivation (as based on 2001 Census data) ranks the 8.414 wards in England and Wales in order of deprivation (1=most deprived). [Note: the ward boundaries are defined as they were in 2001.]
19. Notable aspects of this include:
 - **Old Costessey** is the most deprived ward in South Norfolk, ranking 2, 522 nationally. It is the most deprived ward in South Norfolk with regard to income, employment, housing and child poverty.
 - **Diss Town** shows as among the three most deprived wards in South Norfolk with regard to income, education and child poverty.
20. Five wards are among the thousand most deprived in terms of access to services:
 - **Long Row** (209) – Burston, Gissing, Shelfanger, Tibenham, Winfarthing
 - **Springfields** (251) – Bunwell, Carleton Rode
 - **Marshland** (657) – Aldeby, Burgh St Peter, Gillingham, Toft Monks, Wheatacre
 - **Clavering** (747) – Haddiscoe, Hales, Heckingham, Norton Subcourse, Raveningham, Thurlton
 - **Wodehouse** (819) – Barford, Barnham Broom, Kimberley, Runhall, Wrampingham

Housing

21. The number of dwellings in 2001 was 48, 505. The average household was 2.34 people (compared with 2.36 for England and Wales). Overcrowding is not a serious problem in South Norfolk as only 2.3% of households are overcrowded, compared with a national figure of 7%. House prices have increased rapidly during the last four years. The type of properties in South Norfolk reflects the rural nature of the district. The nature of private sector housing can be summarised as seen in Figure 4 below.

Figure 4: Household occupation statistics (Source: 2001 Census, ONS)
South Norfolk / England & Wales Difference - Tenure

Owner Occupied	Private Rent	Council	Housing Association
+11.5%	-2.2%	-5.1%	-4.2%

South Norfolk / England Difference - Property Type

Terraced house	Semi-detached house	Detached house	Flat
-19.0%	-10.7%	+34.4%	-14.7%

22. In terms of the age of property in the District the split shows: - **Property Age in South Norfolk**

Pre 1919	1919-1944	1945-1964	Post 1964
-3.5%	-11.5%	-4.5%	+19.6%

Geographical Setting

23. South Norfolk is a varied district, historically rural in nature and containing a mix of scattered settlements and historic market towns, some of which have significant relationships to the neighbouring city of Norwich. The natural environment is a mixture of broad, open arable farmland and six main river valleys, with the additional interests of the Norfolk and Suffolk Broads and the major watercourses the rivers Yare and Waveney to the north and east acting as boundaries between neighbouring districts. South Norfolk is built on glacial deposit geology and is dominated by the broad 'national character area' of the South Norfolk and High Suffolk Claylands.
24. The environment is a vital aspect of recreation and the economy for South Norfolk. Traditionally farming has acted as a custodian of the environment. Today's modern methods continue to shape the landscapes of the area, through, for example, Environmental Stewardship schemes. These have been able to benefit both residents, who enjoy the tranquillity and peaceful surroundings, and the range of biodiversity found in the District. More recently, the tourist economy has realised these features and continues to grow by utilising the unique character of South Norfolk and advocating its protection.

Biodiversity

25. The importance of South Norfolk's environmental features is illustrated through the number of important natural habitat and wildlife sites, including internationally protected Ramsar wetlands of the Broads and Special Areas of Conservation sites of the River Wensum, the Norfolk Valley Fens and the Broads. There are also: 26 unique distinctive SSSI habitat and geological sites, such as Hardley Flood; numerous scattered sites, including National and Local Nature Reserves; some 1,700 ha of County Wildlife Site semi-natural habitat; and multiple stands of Ancient Woodland. Plans should seek to conserve these areas of wildlife and habitat importance and give protection to those species identified by law. In doing so, South Norfolk's planning strategy can contribute to the achievement of Norfolk's Biodiversity Action Plan targets.
26. At a time of climatic change and growth pressures, there may be significant value in identifying where vulnerable habitats exist, making provision for either their relocation or replacement in other suitable locations, as was achieved as part of the Cleylands wetland project. The regional environment strategy recognises the importance of being proactive, believing the Fens in particular to contain 40% of the
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East of England's potential sites. There may also be value in designating natural corridors or 'biodiversity highways' that can assist the movement of species between areas and reduce fragmentation of the natural habitat.

Landscapes

27. An important characteristic of South Norfolk, the historic and rural landscape has been protected to ensure that it continues to be recognisable despite the growing pressures of development. Plans must strive to minimise the amount of greenfield land required for development and ensure retention of the District's best features. All design should strive to appreciate the sensitivity of landscapes, reflect their existing form, cultural heritage and biodiversity assets. Proposals should be assessed individually for their sustainability.
28. The first stage in any attempt to embrace landscape character within strategic plans must be to identify those features that make the District unique. A Landscape Character Assessment categorises differences across the area and gives guidance how development should seek to integrate with its surroundings in a sensitive manner. Further, the sensitivity of landscape types in relation to wind turbine proposals has also been assessed.
29. The South Norfolk Landscape Assessment defines seven separate landscape types:
 - Rural river valley
 - Tributary farmland
 - Tributary farmland with parkland
 - Settled plateau farmland
 - Plateau farmland
 - Valley urban fringe
 - Fringe farmland
30. These landscape classifications have been further refined into detailed character area descriptions to better reflect specific local features and characteristics, such as those relevant to individual river valleys.
31. Additional measures introduced to ensure that the rural setting of some of South Norfolk's settlements is maintained include designating 'areas of open land that maintain a separation between settlements in the Norwich area' within which inappropriate development will not be allowed. These designations seek to prevent the loss of those gaps/areas where segregation and/or historical relationship to the countryside are discernable features of a settlement e.g. maintaining separations between Cringleford, Hethersett and Wymondham.
32. On a larger scale, the area around the A47 to the south of Norwich has also been recognised for its contribution to the historic setting of the city of Norwich, and receives protection against inappropriate development. This measure has worked

effectively in maintaining the landscape setting of the A47 and preventing it from becoming a boundary for development. The Broads and many river valleys, largely sparse in settlement and containing some very distinctive historical features and land use, have also been protected in the past.

33. Issues affecting the landscapes that we value so much are real and ongoing. The Countryside Agency's *Countryside Quality Counts* initiative found that in the Joint Character Areas (JCA) covering parts of South Norfolk between 1990 and 1998, there had been "limited or small changes consistent with character" for The Broads and South Norfolk and High Suffolk Claylands areas. In the Mid Norfolk JCA, however, there was evidence of "marked changes inconsistent with character".

Built Heritage

34. The distinctive style of South Norfolk's townscapes and historic architecture is an important consideration within development strategies, playing a large role in settlement character, rural lifestyles and tourism attractions. The preservation and enhancement of the 3,464 Listed Buildings, 46 Scheduled Ancient Monuments and 51 different Conservation Areas in the District is of national importance, and seen as vital in order to protect the District's unique identity and heritage. However, there are clear threats to their preservation and enhancement; 60 listed buildings remain on the 2005 Buildings at Risk Register, and many historic parklands are under threat and disappearing as maintenance costs and the attractiveness of development opportunities increase. There are 18 Parks and Gardens of historic interest remaining in South Norfolk, but at least 26 have been lost since the 1880s.
35. Similarly, there are many areas of significant archaeological interest within the district, and many more which are as yet undiscovered. It is important that every effort is made to preserve these remains or at least record their value to the history of the area. The protection offered to the Roman-era hedgerow pattern in Dickleburgh and the use of conditions relating to archaeological surveys, protection, and recording on planning permissions is successful examples of this.

Climate Change and Pollution

36. There is an increasing need to ensure that our lifestyles make minimal contribution to climate change or pollution levels, which can in part be influenced by the planning process. Encouraging and facilitating the use of public transport and renewable energy will improve both local air quality and reduce output of greenhouse gases. Significant, dramatic progress towards this objective can also be achieved through improving the energy efficiency of homes and workplaces, which could involve new design standards, considered material use and resource 'capture' such as grey-water harvesting, solar gain, ground source heat pumps etc. Aspiring to standards such as BREEAM and Eco-Homes ratings, for example, are successful means of integrating environmental awareness into construction.

Reducing the Risks from Flooding

37. Climate change is also increasing the occurrence of flooding and exceptional weather events. Spatial planning must consider the threats posed to development and plan for
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the District's growth accordingly. Avoiding inappropriate development in areas at risk of flooding is one aspect of this, as required by PPS1. Draft versions of the PPS25 'Development and Flood Risk' suggest that a Strategic Flood Risk Assessment (SFRA) should be used to identify constraints to development in certain areas. South Norfolk Council will undertake a SFRA that establishes sensitive areas for development based on flood plains for tidal surges and fluvial flooding, and suggests mitigation measures for some areas presently at risk. Further studies could also look at where the geology of the District would enable some Sustainable Urban Drainage Systems to be established. The Environment Agency is also developing Catchment Flood Management Plans and Abstraction Management Strategies, both of which will inform and influence the way that consideration for flood and groundwater levels is taken into account at the development plan level, for making allocations and preparing for water shortages. Only by 'building-in' all these constraints and evidence bases can we allocate and design land use proposals with greater sustainability.

INFORMATION ON LOCAL COUNTY WILDLIFE SITES

Earlham Marsh

38. An area of grazed meadowland adjacent to the R.Yare. It is divided into two sections by a path which runs down to the river. The field to the west is drier than that on the eastern side.
39. The drier grassland is composed of a fairly patchy herbaceous vegetation. Grasses present include meadow foxtail (*Alopecurus pratensis*) and locally frequent creeping bent (*Agrostis stolonifera*). The herbs consist of a number of locally abundant species such as black horehound (*Ballota nigra*), broad-leaved dock (*Rumex obtusifolius*), creeping thistle (*Cirsium arvense*), good-King-Henry (*Chenopodium bonus-henricus*) and common meadow-rue (*Thalictrum flavum*). Denser areas of some of these species and others also occur, particularly nearer to the path. Species occurring in abundance here include plicate sweet-grass (*Glyceria plicata*), spear-leaved orache (*Atriplex prostrata*), and common sedge (*Carex nigra*).
40. The eastern more marshy grassland is covered by abundant plicate sweet-grass and in places spear-leaved orache as well as dense patches of common sedge and locally abundant pale persicaria (*Polygonum lapathifolium*). Other species to be found amongst this vegetation include tufted vetch (*Vicia cracca*), common valerian (*Valeriana officinalis*), tufted forget-me-not (*Myosotis laxa*) and celery-leaved buttercup (*Ranunculus sceleratus*).

Heronry and Violet Grove

41. This site includes a diverse range of habitat types including dense tall marsh, unimproved and semi-improved neutral grassland. There are also various woodland types, mainly neutral and dominated by oak and ash which have dense shrub layers. There is also the site of a pond which has silted up and dried out to swamp.
 42. Adjacent to the R.Yare there is an area of dense, rank, tall marshy vegetation. It is fairly boggy and moderately species-rich. It is dominated by large patches of either common reed (*Phragmites australis*), reed sweet-grass (*Glyceria maxima*) or by various mixtures of great willowherb (*Epilobium hirsutum*), meadow sweet (*Filipendula ulmaria*), nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*), hedge bindweed (*Calystegia sepium*) or marsh woundwort (*Stachys palustris*). There are some intermixed patches of drier, unimproved neutral grassland. These tend to be dominated by false oat-grass (*Arrhenatherum elatius*) with frequent creeping thistle and occasional black knapweed (*Centaurea nigra*), red fescue (*Festuca rubra*), hogweed (*Heracleum sphondylium*) and yarrow (*Achillea millefolium*). There are a few scattered willows (*Salix* sp.) on the site.
 43. Just set back from the river is the site of an old pond which has largely silted up and become encroached by willows and is now largely swamp. The site comprises a small area of dense common reed surrounded by fairly mature grey willow (*Salix cinerea*) over lesser pond sedge (*Carex acutiformis*). The northern part is a small species-rich area with abundant lesser pond sedge, water mint (*Mentha aquatica*) and purple-loosestrife (*Lythrum salicaria*). Other species present include marsh dock (*Rumex palustris*).
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44. Extending south from the pond at the edge of the floodplain is ash dominated wood with a dense elm (*Ulmus procera*) and sycamore (*Acer pseudoplatanus*) understorey. There is a shrub layer of hawthorn (*Crataegus monogyna*) and holly (*Ilex aquifolium*) which is frequent in parts. The ground flora is generally poor and very scattered in places consisting mainly of either ivy (*Hedera helix*) or nettle and herb robert (*Geranium robertianum*). Further south this becomes dense oak (*Quercus robur*) and ash (*Fraxinus excelsior*) dominated wood with a frequent hazel (*Corylus avellana*) shrub layer, possibly coppice. Hawthorn and elder (*Sambucus nigra*) also occur with frequent gooseberry (*Ribes uva-crispa*) and sucking elm. Eventually the woodland becomes a scattered acid wood of oak, rowan (*Sorbus aucuparia*) and silver birch (*Betula pendula*) with ground flora dominated by dense bracken (*Pteridium aquilinum*) and bramble (*Rubus fruticosus*).
45. Upslope of the woodland in the north of the site is an area of neutral semi-improved grassland dominated by Yorkshire fog (*Holcus lanatus*). Other species frequently present include black knapweed, yarrow and ladies bedstraw (*Galium verum*).

UEA Broad

46. A large mesotrophic lake with limited aquatic vegetation but which has a moderately species-rich marginal vegetation. It is partly fringed by scattered trees and shrub such as willows (*Salix* sp.) and alder (*Alnus glutinosa*).
47. The lake is largely mesotrophic in character with slightly turbid water and a muddy/stony substrate. Floating vegetation is reduced to small areas of white water-lily (*Nymphaea alba*), amphibious bistort (*Polygonum amphibium*) and broad-leaved pondweed (*Potamogeton natans*). Perfoliate pondweed (*Potamogeton perfoliatus*) is also present. The marginal vegetation is fairly thin and more or less complete. It is moderately species-rich with frequent greater pond sedge, great willowherb (*Epilobium hirsutum*), reed sweet-grass (*Glyceria maxima*) and in places common reed (*Phragmites australis*). Other species present include lesser pond sedge (*Carex acutiformis*), iris (*Iris* sp.), bulrush (*Typha latifolia*), water mint (*Mentha aquatica*), marsh woundwort (*Stachys palustris*) and water forget-me-not (*Myosotis scorpioides*).
48. There is a small island in the north west corner of the lake which is covered by tree and shrub species such as willows, oak (*Quercus robur*), alder (*Alnus glutinosa*) and ash (*Fraxinus excelsior*) over bramble (*Rubus fruticosus*) and ivy (*Hedera helix*).

Bowthorpe Riverside

49. This site, which is in two parts, largely comprises unmanaged floodplain marshy grassland on one side of the R.Yare. It forms the eastern edge of a much larger County Wildlife Site which includes the complex of habitats associated with the former Bawburgh/Colney gravel workings.
50. The marsh is dominated by great willowherb (*Epilobium hirsutum*) with nettles (*Urtica dioica*) frequent. Tall dense vegetation, it verges on tall fen in places with large patches of reed canary-grass (*Phalaris arundinacea*) and reed sweet-grass (*Glyceria maxima*). Broad-leaved dock (*Rumex obtusifolius*) and common couch (*Elymus repens*) are locally frequent in drier areas.

51. Extending up to the higher ground the grassland becomes unimproved and rank, largely comprising false oat-grass (*Arrhenatherum elatius*), cock's foot (*Dactylis glomerata*) and often tufted hair-grass (*Deschampsia cespitosa*). Where false oat-grass dominates the associated herbs include broad-leaved dock, creeping thistle (*Cirsium arvense*), field wormwood (*Artemisia capestris*), nettles and wild radish (*Raphanus raphanistrum*).
 52. The south east corner of the site comprises a small area of woodland associated with a former pit.
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Appendix 5

SA Objectives, decision-making criteria and indicators

Objectives	Decision-Making Criteria	Indicator-based concerns
Environmental objectives		
ENV1: To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation	<ul style="list-style-type: none"> Will it protect sites of nature conservation value from inappropriate development? Will it increase the number or diversity of sites of nature conservation interest? Will it bring negative effects to designated sites and what would this involve? Will it adversely affect sites of geological interest? Will it contribute to achieving BAP targets? 	<p>Ability to influence Biodiversity Action Plan Progress and protect SSSIs</p> <p>Limiting detrimental change to areas designated for their intrinsic environmental value or habitat / species importance</p>
ENV2: To limit or reduce vulnerability to climate change, including minimising the risks from flooding	<ul style="list-style-type: none"> Will it minimise the risk of flooding? Will it help reduce the vulnerability of agriculture to changes in weather patterns? Is it promoting sustainable use of flood zones? Does it encourage habitat relocation or compensation? 	<p>Reducing the number of planning applications permitted in flood zones</p> <p>Reducing the vulnerability of planning applications permitted in flood zones</p>
ENV3: To maximise the use of renewable energy solutions and reduce contributions to climate change	<ul style="list-style-type: none"> Will it encourage efficient use of energy? Is it promoting a sequential approach to the pattern of development? Will it reduce the emissions of greenhouse gases, including from traffic? 	<p>Improving the provision of renewable energy generating schemes</p> <p>Reducing household energy use and increasing use of energy from renewable sources</p>
ENV4: To reduce the effect of traffic on the environment	<ul style="list-style-type: none"> Will it reduce traffic volume? Will it reduce traffic congestion? Will it reduce the effect of HGV traffic on people and environment? Will it increase the % of journeys made using non-car modes? 	<p>% residential development complying with car-parking standards</p> <p>Encouraging the use of non-car modes of transport</p>
ENV5: To improve air quality and minimise noise, vibration and light pollution	<ul style="list-style-type: none"> Will it reduce emissions of atmospheric pollution? Can it improve the ambiance of local areas? 	<p>Minimising the instances of particulate, NO₂ and ozone pollution</p> <p>Trying to avoid the need for Air Quality Management Areas</p>
ENV6: To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment	<ul style="list-style-type: none"> Will it protect vulnerable and valued landscapes, or mitigate the effects of inappropriate development? Will it ensure that design is complementary to, or able to enhance, the character of local landscapes? Will it reduce the amount of derelict, degraded and under-used land? Will the District's heritage be preserved or enhanced? 	<p>Listed buildings and scheduled ancient monuments considered 'at risk'</p> <p>Establishing Conservation Area management plans to maintain heritage preservation</p>

Objectives	Decision-Making Criteria	Indicator-based concerns
ENV7: To minimise the loss of undeveloped land and conserve and improve the quality of soil resources	<ul style="list-style-type: none"> Will it avoid the use of productive agricultural land? Will it minimise the irreversible use of soil resources? 	% of new dwellings built on previously developed land New dwellings densities and land use efficiency Contaminated land: its availability and restrictions to new development
ENV8: To improve water qualities and provide for sustainable sources of supply and sustainable use	<ul style="list-style-type: none"> Does it incorporate Sustainable Urban Drainage Systems? Will it reduce water consumption? Will the supply of water be efficient in terms of the overall network? 	Planning permissions granted contrary to Environment Agency water quality advice Groundwater resource availability across the District
ENV9: To minimise the production of waste and increase recycling	<ul style="list-style-type: none"> Will it result in less waste being produced or requiring disposal? Will it facilitate better community recycling facilities? 	<i>Reducing the number of kilograms of household waste collected per head</i> Increasing the % of waste that is recycled or composted
Social objectives		
S2: To reduce poverty, inequality and social exclusion	<ul style="list-style-type: none"> Will it reduce poverty and social exclusion in those areas most affected? 	% of the population living in the most deprived super output areas of the country Reducing the numbers of people claiming Job Seekers Allowance
S3: To offer opportunities for all sections of the population to have rewarding and satisfying employment	<ul style="list-style-type: none"> Will it reduce unemployment overall? Will it improve earnings? Will it improve access to employment and help to create a better housing-jobs balance? 	% of the population of working age in employment Improving the level of average earnings
S4: To improve accessibility to essential services, facilities and the workplace, particularly for those most in need	<ul style="list-style-type: none"> Will it improve accessibility to key local services? 	Improving the effectiveness of public transport to service public facilities Improving the level of facilities in local areas for local people to access
S5: To improve the education and skills of the population overall	<ul style="list-style-type: none"> Will it improve qualifications and skills of young people? Will it improve access to schools / education facilities? Will it encourage opportunities for vocational skills training and improve local links with the workplace? 	Improving the level of school exam performance Improving the vocational training amongst the working population

Objectives	Decision-Making Criteria	Indicator-based concerns
S6: To assist the maintenance and improvement of the health of the population overall	<ul style="list-style-type: none"> Will it reduce death rates? Will it improve access to high quality health facilities? Will it encourage healthy lifestyles? 	<p>Ability to access GP services within 2 working days</p> <p>Improving the general life expectancy at birth</p>
S7: To encourage local community identity and foster mixed communities with co-operative attitudes, helping to reduce anti-social activity	<ul style="list-style-type: none"> Will it reduce actual levels of crime?/ fear of crime? Will it encourage engagement in community activities? 	<p>Levels of crime and the community's general fear of crime</p> <p>Ability to create mixed and participative communities, eg. through election turnout</p>
S8: To improve the quality of where people live	<ul style="list-style-type: none"> Will it improve satisfaction of people with their neighbourhoods? Will it increase access to and provision of quality open space? 	<p>Improving the quality of green open spaces for the wider population</p> <p>Residents' perception of the quality of their neighbourhoods as places to live</p>
Economic objectives		
EC1: To encourage sustained economic growth	<ul style="list-style-type: none"> Will it support emerging employment uses in the District (e.g. Research, tourism)? Will it help retain existing businesses? Will it aid farming diversification? 	<p>Improving floor space used for economic uses, especially in regeneration areas</p> <p>Facilitation more VAT registered businesses in the District, eg. by providing land</p>
EC2: To encourage and accommodate both indigenous and inward investment promoting a positive image of the District	<ul style="list-style-type: none"> Will it provide for a variety of locations for businesses? Will it add to a ready supply of employment premises? Is it supporting targeted emerging employment types? 	<p>Assessing the availability of employment land across the District</p>
EC3: To encourage efficient patterns of movement in support of economic growth	<ul style="list-style-type: none"> Will it encourage the development of local employment locations? Is it located so as to minimise the journey to work? Will it enhance a group of existing employment generating uses? Will it encourage mixed use or live / work? 	<p>Travel-to-work by mode data</p> <p>Reducing the reliance on accessing the workplace via private car</p>
EC4: To improve the social and environmental performance of the economy	<ul style="list-style-type: none"> Will it offer the opportunity for more flexible working? Will it operate in a way that seeks to minimise impact on the environment? 	<p>Encouraging business to work towards gaining Investors in People accreditation</p> <p>Amount of floor space developed by employment type on previously developed land</p>
EC5: To improve economic performance in rural areas	<ul style="list-style-type: none"> Will it encourage rural diversification? Will it offer sources of employment in rural areas? Will it improve electronic communication potential? 	<p>Planning permissions granted for business use outside towns</p> <p>Improving the 'jobs density', as number of</p>

Objectives	Decision-Making Criteria	Indicator-based concerns
		jobs to every resident of working age

Appendix 6

Components of the broad option transport strategies

COMPONENTS OF THE BROAD OPTION TRANSPORT STRATEGIES

53. Details of the components which make up the three broad option transport strategies are described in *Norwich Research Park Transport Assessment Part I – Development Trips* (Norfolk County Council and Mott MacDonald, July 2006). They are summarised below:

STRATEGY 1: PUBLIC TRANSPORT FOCUSED ACCESS

54. Strategy elements identified for this strategy include:
- Provision of high standard walking and cycling routes to the residential catchment.
 - Provision of high quality internal walking and cycle network within the NRP.
 - Infrastructure and support for bus services through NRP.
 - Construction of a bus lane on the B1108.
 - Improved sustainable transport links with UEA.
 - Additional capacity of bus services if required.
 - Increased capacity of Park and Ride sites and new/enhanced services to NRP.
 - Dedicated bus services ('works' buses).
 - Whole route bus priority measures.
 - Restricted car access to NRP (parking standards and access control).
 - External parking restrictions everywhere within an 800 metre site perimeter.
 - Limited local road improvements.

STRATEGY 2: CAR-DEPENDANT ACCESS

55. Strategy elements identified for this strategy include:
- New/improved road infrastructure.
 - Provision of high standard walking and cycle routes to the residential catchment.
 - Provision of high quality internal walking and cycle network within the NRP.
 - Infrastructure for bus services through NRP.
 - Local bus priority measures.
 - Limited local road improvements.
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STRATEGY 3: MIXED PUBLIC TRANSPORT AND CAR ACCESS

56. Strategy elements identified for this strategy include:
- Provision of high standard walking and cycle routes to the residential catchment.
 - Provision of high quality internal walking and cycle network within the NRP.
 - Infrastructure and support for bus services through NRP.
 - Construction of a bus lane on the B1108.
 - Additional capacity of bus services if required.
 - Whole route bus priority measures.
 - New Bus Only rear link to NNUH from UEA.
 - Restricted car access to NRP (parking standards and access control).
 - New Road Infrastructure (Partly).
 - New £6.5m road between B1108 and Hethersett Lane.
 - Signalisation of B1108/Hethersett Lane junction to car traffic.
 - Signalisation of junction at link road with B1108 or similar.
57. The access strategy elements are summarised in **Table A5.1** below.

Table A5.1: Access Strategy Elements

Element	Possible measures	Access strategy		
		1: Public transport focused access	2: Car dependant access	3: Mixed public transport and car access
Provision of high standard walking and cycle routes to residential catchments	Network to Earlham, West Earlham, Bowthorpe and Cringleford. Complete B1108 cycle route and widen footway/cycleway over river bridge Improved crossing at Wilberforce Road/Watton Road Improve Hethersett Lane	✓	✓	✓
Provision of high quality internal walking and cycle network within the NRP	Well connected network on improved roads and within developments	✓	✓	✓
Infrastructure and support for bus services through NRP	Selective vehicle detection (bus priority) at Colney Lane junction University Drive bus contraflow/Bluebell Road bus gate	✓	✓	✓
Bus lanes	Construction of a bus lane on the B1108	✓	✓	
Improved sustainable transport links with UEA	Provide a dedicated shuttle service	✓		
Additional capacity of bus services if required	More buses on route 25	✓	✓	
Increased capacity of Park & Ride sites and new/enhanced services to NRP	Enlarge Thickthorn and/or Costessey Park & Ride sites	✓	✓	
Dedicated bus services ('works' buses)	Private contracts by NRP developers	✓		
Whole route bus priority measures	Remove bottlenecks on route 25	✓	✓	

Element	Possible measures	Access strategy		
		1: Public transport focused access	2: Car dependant access	3: Mixed public transport and car access
New bus only rear (west) link to the NNUH	Widen current cycle and walking path to accommodate bus lane	✓	✓	✓
Restricted car access (reduced employee parking)	Access barriers at new developments. Reduced parking standards for employees		✓	
Restricted car access (no employee parking)	Access barriers at new developments. Parking for disabled, servicing and visitors only	✓		
External parking restrictions everywhere within 800 metres	Traffic regulation orders on all existing and new roads within half hour walking distance, e.g. no waiting before 9.30am, 2 hour limited waiting or Controlled Parking Zone (CPZ)	✓		
Limited local road improvements	B1108 single 2 lane improvement Hethersett Lane/B1108 safety improvements	✓	✓	✓
New road infrastructure	New 6.5m link road between the B1108 and Hethersett Lane	✓	✓	✓
	New 6.5m link road between Hethersett Lane and Colney Lane			✓
	Signalisation of A47/B1108 roundabout		✓	✓
	Additional eastbound lane on the B1108 between the A47 and Colney Hall Junction			✓
	New second vehicular access to Colney Hall			✓
	Closure of B1108/Hethersett Lane junction to car traffic	✓	✓	✓
	Signalisation of junction at link road with B1108 or similar access connection		✓	✓

Appendix 7

Appraisal of Broad Options

Appraisal of broad options

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
Environment							
ENVI	<p>To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect sites of nature conservation value from inappropriate development?• increase the number or diversity of sites of nature conservation interest?• bring negative effects to designated sites and what would this involve?• adversely affect sites of geological interest?• contribute to achieving BAP targets?)	<p>Score: --/+/? Rank: 1</p>	<p>Score: --/+/? Rank: 2</p>	<p>Score: --/+/? Rank: 4</p>	<p>Score: --/+/? Rank: 2</p>	<p>Score: --/+/? Rank: 4</p>	<p>Undertake a preliminary Phase I habitat survey to identify the existence of protected species or habitats. If they are present, habitats should be protected/enhanced on-site where possible. However, off-site mitigation or replacement habitat may be required where on-site mitigation is not appropriate (e.g. in the case of protected birds dependant on arable farming and grassland habitats).</p>
		<p>All five broad options have the potential to negatively affect biodiversity and geodiversity. There is a site of nature conservation interest and geologic/geomorphologic value towards the north of NRP which borders Colney Hall (see map 3.2 in Scoping Report) and which could be negatively affected by development, e.g. from run-off, disturbance during construction and operation of NRP, etc. Whilst all options are expected to give rise to minor negative impacts in relation to this site, the level of impact is likely to be proportional to the amount of development (including both buildings and car parking), i.e. increasing as the plot ratio and quantity of car parking increases.</p> <p>All broad options could also conflict with the achievement of Norfolk’s Biodiversity Action Plan (BAP) targets. There are a series of species action plans and habitat actions plans that could be significantly affected by development at NRP. To determine the significance of these impacts, it is recommended that a Phase I habitat survey is undertaken on site to identify the existence of protected species or habitats that could be affected by development and to identify appropriate mitigation measures.</p> <p>There is potential however, that development at NRP could create natural habitats in those areas where built development will not occur. There is uncertainty associated with this positive effect as the incorporation of any natural habitats is currently unknown. Whilst all options could result in minor positive impacts in relation to this site, positive effects are likely to be greatest for those with the smallest plot ratio under the intermediate transport strategy.</p> <p>Conclusion: the broad options with the lowest plot ratios and quantities of car parking perform the best against this SA objective, i.e. option 1.</p>					
ENV2	<p>To reduce vulnerability to climate change, including minimising the risks from flooding.</p>	<p>Score: - Rank: 1</p>	<p>Score: - Rank: 2</p>	<p>Score: - Rank: 4</p>	<p>Score: - Rank: 2</p>	<p>Score: - Rank: 4</p>	<p>Incorporate adaptation measures into development at NRP to reduce the vulnerability of</p>
		<p>All broad options could negatively affect vulnerability to climate change. For example, increasing the</p>					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
		area of impermeable surfaces in the area could increase vulnerability to flooding. This level of impact is likely to increase as the amount of development and provision of car parks increases, i.e. as plot ratio increases under the car dependant transport strategy. Conclusion: broad option 1 performs the best against this SA objective having the lowest plot ratio and requiring the least amount of car parking.					
ENV3	To maximise the use of renewable energy solutions and reduce contributions to climate change. (E.g. Will the option... <ul style="list-style-type: none">contribute to achieving BAP targets?encourage efficient use of energy?promote a sequential approach to the pattern of development?reduce the emissions of greenhouse gases, including from traffic?)	Score: -/? Rank: 1	Score: -/? Rank: 2	Score: -/? Rank: 3	Score: --/? Rank: 4	Score: --/? Rank: 5	Ensure the efficient use of energy in development proposals. Ensure the use of Travel Plans to encourage the uptake of sustainable modes of transport.
		All broad options are expected to increase traffic to the site to access employment opportunities and local facilities and services. All access strategies seek to improve public transport, walking and cycling linkages to the site, reducing the emissions of greenhouse gases from traffic. However, Options 4 and 5 provide full standard parking which could encourage employees and visitors to use their cars, increasing emissions accordingly. For example, under the car-dependant scenarios, an estimated 92.6% of trips to NRP are expected to be made by car occupants (compared to 75% under the Intermediate Strategy) (Mott MacDonald and South Norfolk Council NRP Transport Assessment, 2006). There is uncertainty associated with the effect on this SA objective. For example, the uptake of sustainable modes of transport under the intermediate strategy is currently unknown. Given that increasing plot ratios are likely to generate more employment opportunities at and visitors to the site, it is likely that emissions of greenhouse gases associated with traffic are likely to increase as plot ratio increases. Conclusion: broad option 1 performs the best against this SA objective, minimising the contribution of greenhouse gas emissions from development at NRP.					
ENV4	To reduce the effect of traffic on the environment. (E.g. Will the option... <ul style="list-style-type: none">reduce traffic volumes?reduce traffic congestion?	Score: -/++/? Rank: 1	Score: -/++/? Rank: 2	Score: --/++/? Rank: 3	Score: --/++/? Rank: 4	Score: --/++/? Rank: 5	Ensure the use of Travel Plans to encourage the uptake of sustainable modes of transport.
		As stated above, all broad options are expected to increase traffic generation to the site to access employment opportunities and local facilities and services. All access strategies seek to improve public transport, walking and cycling linkages to the site, encouraging the use of non-car transport modes to access NRP. However, Options 4 and 5 provide full standard parking which could encourage employees and visitors to use their cars, reducing the proportion of journeys using non-car modes.					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
ENV5	<p>To improve air quality and minimise noise, vibration and light pollution.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• reduce emissions of atmospheric pollution?• improve the ambience of local areas?)	<p>Score: -/? Rank: 1</p>	<p>Score:-/? Rank: 2</p>	<p>Score: -/? Rank: 3</p>	<p>Score: --/? Rank: 4</p>	<p>Score: --/? Rank: 5</p>	<p>Ensure good practice construction procedures are followed to minimise the effects of noise, vibration and light pollution (e.g. use appropriate sound insulation on all construction machinery).</p>
		<p>As commented under SA objective ENV4, all broad options are expected to increase traffic generation at NRP. Whilst this could be minimised under broad options 1-3 by encouraging the use of sustainable modes of transport, options 4 and 5 could result in increases in noise and vibration associated with transport. For example, increased traffic could result in a perceptible increase in noise in some residential areas. However, there is uncertainty associated with this appraisal as the uptake of sustainable modes of transport is unknown.</p> <p>Any new development is likely to increase noise, vibration and light pollution during both the construction and operation phases compared to the existing predominantly agricultural use. These are likely to be mitigated by appropriate measures, however residual impacts are expected to remain.</p> <p>The potentially negative affects associated with air quality, noise, vibration and light pollution are expected to increase as plot ratio increases. The higher the plot ratio, the greater the generation of traffic and potential for noise and vibration from a greater number of buildings.</p> <p>Conclusion: broad option 1 performs the best against this SA objective, having a low plot ratio and providing sustainable modes of transport.</p>					
ENV6	<p>To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect vulnerable and valued landscapes. or	<p>Score: -/? Rank: 1</p>	<p>Score: -/? Rank: 2</p>	<p>Score: -/? Rank: 4</p>	<p>Score: -/? Rank: 2</p>	<p>Score: -/? Rank: 4</p>	<p>Adopt design principles that complement or enhance local landscapes.</p>
		<p>NRP falls within two Characters Areas within two different Landscape Types, both of which are characterised by open and long views to the city of Norwich. The characteristics of the Yare Valley Urban Fringe Character Area (which accounts for a small part of the north of NRP) focus around its valley form, which is relatively unusual for South Norfolk. The open and long views and the setting of the valley form could be compromised by all five broad options. However, there is already</p>					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
	<p><i>valued landscapes, or mitigate the effects of inappropriate development?</i></p> <ul style="list-style-type: none">• <i>ensure that design is complementary to, or able to enhance, the character of local landscapes?</i>• <i>reduce the amount of derelict, degraded and under-used land?</i>• <i>preserve or enhance the District's heritage?)</i>	<p>the valley form could be compromised by all five broad options. However, there is already development presence at NRP in the form of the Norfolk and Norwich University Hospital and the John Innes Centre. The level of this negative impact is likely to be proportional to the quantity of development as determined by the plot ratio and provision of car parking. For example, larger plot ratios and areas of car parking could result in higher or more dense developments, which would have a greater negative impact on the local landscape compared to smaller plot ratios. However, the expression and quality of development in relation to the different plot ratios is unknown, bringing uncertainty to the appraisal.</p> <p>In addition, all broad options involve development on currently productive agricultural land which will conflict with the decision-making criteria of reducing the amount of derelict, degrading and under-used land.</p> <p>Conclusion: broad options 1 and 4 perform the best against this SA objective, having the smallest plot ratios, minimising the effect on the local landscape.</p>					
ENV7	<p>To minimise the loss of undeveloped land and conserve and improve the quality of soil resources.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• <i>avoid the use of productive agricultural land?</i>	<p>Score: -- Rank: 1</p>	<p>Score: -- Rank: 1</p>	<p>Score: -- Rank: 1</p>	<p>Score: -- Rank: 1</p>	<p>Score: -- Rank: 1</p>	<p>Ensure that phasing of development leaves land packages favourable for ongoing agricultural use until developed.</p>
		<p>All broad options involve development on currently productive agricultural land which will reduce the use of soil resources in the area. This is therefore likely to have a significant negative effect on minimising the loss of undeveloped land and improving the quality of soil resources.</p> <p>Conclusion: all broad options are expected to perform the same against this SA objective.</p>					
ENV8	<p>To improve water qualities and provide for sustainable sources of supply and sustainable use.</p>	<p>Score: --/? Rank: 1</p>	<p>Score: --/? Rank: 3</p>	<p>Score: --/? Rank: 5</p>	<p>Score: --/? Rank: 1</p>	<p>Score: --/? Rank: 3</p>	<p>Use water efficient fixtures and fittings and consider the use of water re-use/recycling.</p> <p>Consider the</p>
		<p>All five broad options have the potential to negatively affect the quality of waterbodies, e.g. through contaminated run-off from developed areas. Whilst all options are expected to give rise to minor negative impacts in relation to this site, the level of this impact is likely to be proportional to the</p>					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
		<p>negative impacts in relation to this site, the level of this impact is likely to be proportional to the amount of development, i.e. increasing as the plot ratio increases.</p> <p>Development associated with each option is likely to increase the demand for water resources. Given that the current water supply network in the area around NRP has reached its capacity, any additional demand is likely to significantly affect water resources in the area. Although all options are expected to give rise to significant negative impacts, the level of this impact is likely to be proportional to the amount of development.</p> <p>Conclusion: the broad options with the lowest plot ratios perform the best against this SA objective, i.e. options 1 and 4.</p>					
ENV9	<p>To minimise the production of waste and increase recycling.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> result in less waste being produced or requiring disposal? facilitate better community recycling facilities?) 	<p>Score: -/? Rank: 1</p>	<p>Score: -/? Rank: 3</p>	<p>Score: -/? Rank: 5</p>	<p>Score: -/? Rank: 1</p>	<p>Score: -/? Rank: 3</p>	<p>Ensure there is maximum access to recycling facilities on site.</p> <p>Consider the use of recycled materials or materials available on site for construction purposes.</p>
Social							
SI	To provide everybody with the opportunity to live in a decent, suitable and affordable home.	<p>Score: 0 Rank: 0</p>	<p>Score: 0 Rank: 0</p>	<p>Score: 0 Rank: 0</p>	<p>Score: 0 Rank: 0</p>	<p>Score: 0 Rank: 0</p>	

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
affordable home. (E.g. Will the option... <ul style="list-style-type: none"> • reduce homelessness? • increase the range and affordability and quality of housing stock for all social groups?) 		The broad options are not expected to affect the provision of decent, suitable or affordable housing.					
S2	To reduce poverty, inequality and social exclusion. (E.g. Will the option... <ul style="list-style-type: none"> • reduce poverty and social exclusion in those areas most?) 	Score: +/? Rank: 4	Score: +/? Rank: 2	Score: +/? Rank: 1	Score: +/? Rank: 5	Score: +/? Rank: 3	<p>Indices of Multiple Deprivation¹ show that NRP occurs within several Super Output Areas (SOAs) that are within the top 10 to 30% of least deprived SOAs in England. However, to the north of NRP (along the northern side of the Watton Road), there is an SOA that is within 20% of the most deprived SOAs in England. Given that the broad options are likely to increase employment provision in the area, including a wide range of job types (see commentary under SA objective S3), improve education and skills of the working population (see commentary under SA objective S5), and improve access to local services and facilities, including the Norfolk and Norwich University Hospital (see commentary under SA objectives S4 and S6), they are all likely to reduce poverty, inequality and social exclusion in the area overall. This is likely to be particularly relevant to people living to the north of NRP, although the extent to which people in this area will benefit from development under the broad options is uncertain. Whilst all broad options are likely to have a minor positive effect, those with the higher plot ratios and with improved access to jobs, services and facilities for all groups of people (i.e. car users in addition to those dependant on public transport) are likely to more positively address this SA objective.</p> <p>Conclusion: broad option 3 is likely to perform the best against this SA objective, having the largest plot ratio and allowing access to new and existing services and facilities for the widest group of people.</p>

¹ Indices of Multiple Deprivation provide information on income deprivation, employment deprivation, health deprivation, education, skills and training deprivation, barriers to housing and services, the living environment and crime.

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
S3	To offer opportunities for all sections of the population to have rewarding and satisfying employment. (E.g. Will the option... • <i>reduce unemployment overall?</i> • <i>improve earnings?</i>)	Score: ++ Rank: 4	Score: ++ Rank: 2	Score: ++ Rank: 1	Score: ++ Rank: 4	Score: ++ Rank: 2	
		All broad options are likely to have a significant positive effect on employment provision in the area as the development of allocated sites for research and development are expected to deliver job opportunities. These opportunities are likely to include a wide variety including specialist research posts and support staff. As well as supporting emerging research employment uses in the District (see commentary against SA objective EC1), this potential diversity of jobs could help to address the current reliance on a relatively narrow range of employment sectors in the District (namely retail and manufacturing). Some of the employment generated from the broad options is likely to be highly skilled, specialist research and development posts, which could demand relatively high earnings. Once established, these posts could encourage other firms which require a highly skilled workforce to locate in the area. This could increase average wages in the District and begin to address the current low wages trend in South Norfolk – wages in this District are currently 85% of the national average. Conclusion: Whilst all broad options are likely to have significant positive effects against this SA objective, these effects are likely to be greatest for the highest plot ratios (i.e. broad option 3) as these will result in the creation of the largest number of employment opportunities.					
S4	To improve accessibility to essential services, facilities and the workplace,	Score: ++/? Rank: 1	Score: ++/? Rank: 1	Score: ++/? Rank: 1	Score: +/? Rank: 4	Score: +/? Rank: 4	Ensure adequate facilities and services are provided as part of development at

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
	<p>and the workplace, particularly for those most in need.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">improve accessibility to key local services?)	<p>Access to essential services, facilities and the workplace will improve under all broad options. Whilst the car dependant transport strategy (broad options 4 and 5) focuses on highway improvements, it also includes some measures to encourage the use of sustainable modes of transport, such as the provision of bus, cycleway and pedestrian routes. Therefore, it will help to improve access to existing services (such as the Norfolk and Norwich University Hospital) and new employment opportunities in the area for most groups of people, although focusing on car users. The intermediate transport strategy (broad options 1-3) however, includes a wider range of measures to improve access for public transport users and those travelling by cycle or on foot. Given that non-car users are likely to be most in need, the broad options which include the intermediate transport strategy are likely to result in significant positive effects in relation to improving access to local services and the workplace.</p> <p>It is also assumed that the five broad options would result in the provision of additional services and facilities associated with new development. This would improve accessibility to local services for residents living close to NRP and for employees working at NRP and university. However, there is uncertainty associated with this positive effect as the provision of facilities, and the proximity of services/facilities to public transport nodes/car parks is unknown.</p> <p>Conclusion: broad options 1-3 perform the best against this SA objective, providing the widest range of measures to access new and existing local services.</p>					<p>as part of development at NRP. These facilities and services should complement those that already exist in the area.</p> <p>Ensure that new local services are adequately served by sustainable modes of transport.</p>
S5	<p>To improve the education and skills of the population overall.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">improve qualifications and skills of young people?)	<p>Score: ++ Rank: 4</p>	<p>Score: ++ Rank: 2</p>	<p>Score: ++ Rank: 1</p>	<p>Score: ++ Rank: 4</p>	<p>Score: ++ Rank: 2</p>	
		<p>The five broad options are likely to improve the education and skills of the working population in South Norfolk. All businesses that are to be located at NRP under the options are required to undertake research and development work (South Norfolk Local Plan 2003). This will provide additional research opportunities in the area and encourage the provision of highly skilled jobs. It is expected that there would be more opportunities to improve education and skills under options with higher plot ratios owing to the higher amount of development.</p> <p>Conclusion: broad option 3 is expected to perform the best against this SA objective as it has the highest plot ratio.</p>					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
S6	To improve the health of the population overall. (E.g. Will the option... <ul style="list-style-type: none">• reduce death rates?• improve access to high quality health facilities?• encourage healthy lifestyles?)	Score: ++ Rank: 1	Score: ++ Rank: 2	Score: ++ Rank: 3	Score: + Rank: 4	Score: + Rank: 5	
	Access to Norfolk and Norwich University Hospital will improve under all broad options. As commented under SA objective S4, the car dependant strategy (broad options 4 and 5) focuses on improving accessibility for car users, and the intermediate strategy seeks to improve access for car and public transport users. Broad options 1-3 will therefore improve accessibility to the hospital for the widest group of people. Broad options 1-3 are likely to significantly encourage healthy lifestyles by including the greatest number of measures to encourage travel by cycle and on foot. In addition, it is expected that there will be provision of open spaces as part of the development under all five broad options (see commentary under SA objective S8). This is likely to contribute to the quality of life and the health of those who work at NRP and live nearby. It is likely that this positive effect will be greatest for the lowest plot ratios (i.e. 16 and 19%) given that there is potential for more open space to be provided where there is the lowest amount of development. Conclusion: broad option 1 is expected to perform the best against this SA objective as it improves accessibility to the hospital for a wide group of people, promotes healthy lifestyles by encouraging travel by cycle and on foot, and is likely to provide more open space than those options with higher plot ratios.						
S7	To encouraging local community identity and foster mixed communities with co-operative attitudes, helping to reduce anti-social	Score: + Rank: 4	Score: + Rank: 2	Score: + Rank: 1	Score: + Rank: 5	Score: + Rank: 3	Incorporate principles that help to design-out crime in the development.
	As commented against SA objective S2, the broad options are likely to increase employment provision in the area, improve education and skills of the working population, and improve access to local services						

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
activity. (E.g. Will the option... <ul style="list-style-type: none"> • reduce actual levels of crime/fear of crime? • encourage engagement in community activities?) 		and facilities. These positive effects are all likely to reduce tendencies of the local residents towards anti-social behaviour. Whilst all broad options are likely to have a minor positive effect on crime in the area, those with the higher plot ratios and with improved access to jobs, services and facilities for all groups of people (i.e. car users in addition to those dependant on public transport) are likely to more positively address this SA objective. Conclusion: broad option 3 is likely to perform the best against this SA objective, having the largest plot ratio and allowing access to new and existing services and facilities for the widest group of people.					
S8 To improve the quality of where people live. (E.g. Will the option... <ul style="list-style-type: none"> • improve satisfaction of people with their neighbourhoods? • increase access to and provision of quality open space?) 		Score: ++ Rank: 3	Score: ++ Rank: 1	Score: ++ Rank: 5	Score: ++ Rank: 4	Score: ++ Rank: 3	
		The broad options are all likely to increase employment provision in the area (see commentary under SA objective S3) and improve transport services and access to local services and facilities (see commentary under SA objectives S4 and S6). These positive effects are likely to improve satisfaction of local residents with their neighbourhood. Whilst all broad options are likely to have a significant positive effect on the quality of the local area, those with the higher plot ratios and with improved access to jobs, services and facilities for all groups of people (i.e. car users in addition to those dependant on public transport) are likely to more positively address this SA objective. It is expected that there will be provision of open space as part of the development under all five broad options. This will increase provision of open space in the area. It is likely that this positive effect will be greatest for the lowest plot ratios given that there is potential for more open space to be provided where there is the lowest amount of development proposed. However, there is uncertainty associated with this assessment, as the quality of any open space and access to these open spaces is currently unknown. Conclusion: broad option 2 is likely to perform the best against this SA objective, as it has a medium plot ratio balancing provision of employment opportunities and open space and improves access to jobs, services and facilities for a wide range of groups (including car users and those dependant on public transport).					
Economic							

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
EC1	<p>To encourage sustained economic growth.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">support emerging employment uses in the District (e.g. Research, tourism)?help retain existing businesses?aid farming diversification?)	Score: ++ Rank: 4	Score: ++ Rank: 2	Score: ++ Rank: 1	Score: ++ Rank: 4	Score: ++ Rank: 2	
		<p>All five broad options are likely to encourage sustained economic growth by supporting emerging research employment uses in the District. NRP already plays a significant role in the South Norfolk and greater Norwich economy (e.g. existing institutes at NRP form part of just 5% of employers District-wide with more than 25 employees). Expansion of the site under the five broad options is likely to increase the number of jobs available in both research and development posts and support staff opportunities, and the status of the area as a business and research centre. This positive effect is likely to increase as the plot ratio increases as these will result in the creation of the largest number of employment opportunities.</p> <p>Conclusion: broad option 3 is likely to perform the best against this SA objective, having the largest plot ratio.</p>					
EC2	<p>To encourage and accommodate both indigenous and inward investment promoting a positive image of the District.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">provide for a variety of locations for businesses?add to a ready supply of employment premises?)	Score: ++ Rank: 5	Score: ++ Rank: 4	Score: ++ Rank: 2	Score: ++ Rank: 3	Score: ++ Rank: 1	
		<p>The five broad options are likely to positively contribute to the SA objective of accommodating both indigenous and inward investment. They will provide additional employment locations, targeted at those businesses associated with the emerging industry of research and development.</p> <p>Whilst all options are expected to give rise to significant positive impacts in relation to this SA objective, the level of this positive effect is likely to be greatest for the higher plot ratios and the options including the car dependant strategy. As the plot ratio increases, so will the amount of development proposed, increasing the ability of the District to accommodate businesses, especially those related to research and development. The majority of people (86%) who currently work at and visit NRP and the university travel by car. The broad options that include employment provision allowing access by the car will therefore be more attractive to business looking to locate in the area.</p> <p>Conclusion: broad option 5 is likely to perform the best against this SA objective being the option combining a high plot ratio and car dependant transport strategy.</p>					

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
EC3	To encourage efficient patterns of movement in support of economic growth. (E.g. Will the option... <ul style="list-style-type: none">encourage the development of local employment locations?minimise the journey to work?enhance a group of existing employment generating uses?encourage mixed use or live / work?)	Score: +/-/? Rank: 1	Score: +/-/? Rank: 1	Score: +/-/? Rank: 1	Score: +/-/? Rank: 4	Score: +/-/? Rank: 4	
	The five broad options are expected to have a mixed effect on encouraging efficient patterns of movement in South Norfolk. Positively, the options will encourage the development of local employment locations to Norwich and will enhance a group of existing employment generating uses. However, there is uncertainty as to whether further development at NRP would minimise journey to work distances. As a proxy to travel patterns associated with future development of NRP, the home locations of staff at IFR have been analysed. This exercise shows only 66.5% of staff live within a radius of 5 miles. This suggests that providing additional employment opportunities on the urban fringe of Norwich City could encourage relatively long journeys to work. It is expected that more people would be encouraged to commute these distances by car under the car dependant transport strategy whereas staff and visitors to NRP would be encouraged to find alternatives under the intermediate transport strategy. Therefore, the negative effect associated with options 1-3 could be minimised. There is uncertainty associated with this effect however, as the anticipated uptake of sustainable modes of transport is unknown. Conclusion: broad options 1-3 are likely to perform the best against this SA objective as they encourage staff and visitors to find alternative to the car to access NRP.						
EC4	To improve the social and environmental performance of the economy. (E.g. Will the option... <ul style="list-style-type: none">offer the opportunity for more flexible working?operate in a way which seeks to minimise impact on the environment?)	Score: ? Rank: 1	Score: ? Rank: 1	Score: ? Rank: 1	Score: ? Rank: 1	Score: ? Rank: 1	
	There is uncertainty associated with the effect of the broad options on the social and environmental performance of the economy as the opportunity for flexible working and the operational impacts on the environment are currently unknown. Conclusion: all broad options are expected to perform the same in response to this SA objective, given the uncertainty associated with its effects.						

SA objective		Broad options					Recommendations
Question/decision-making criteria Will the option...?		1: Mixed public transport and car access strategy and 16% plot ratio	2: Mixed public transport and car access strategy and 19% plot ratio	3: Mixed public transport and car access strategy and 24% plot ratio	4: Car dependant access strategy and 16% plot ratio	5: Car dependant access strategy and 19% plot ratio	
EC5	<p>To improve the economic performance in rural areas.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• encourage rural diversification?• offer sources of employment in rural areas?• improve electronic communication potential?)	<p>Score: 0</p> <p>Rank: 0</p>	<p>Score: 0</p> <p>Rank: 0</p>	<p>Score: 0</p> <p>Rank: 0</p>	<p>Score: 0</p> <p>Rank: 0</p>	<p>Score: 0</p> <p>Rank: 0</p>	
		<p>Given that NRP is located on the urban fringe on Norwich City, the broad options are not expected to affect the economic performance of rural areas in South Norfolk.</p>					

Appendix 8

Presentation of the Detailed Options for the Main Site

Option I: Conventional approach



Option 2: Parkland type of development



Option 3: Hybrid option



Appendix 9
Appraisal of Detailed Options for Main Site

Appraisal of detailed options for the Main Site

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
Environment					
ENVI	<p>To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect sites of nature conservation value from inappropriate development?• increase the number or diversity of sites of nature conservation interest?• bring negative effects to designated sites and what would this involve?• adversely affect sites of geological interest?• contribute to achieving BAP targets?)	<p>Score: +/-/? Rank: 3</p> <p>All three detailed options for the layout of development at the main site have the potential to positively contribute to this SA objective through the creation of habitats. Option 2 is likely to make the most positive contribution to biodiversity by providing a parkland type of development where buildings sit within a sweeping landscape. Depending on the management of this landscape, opportunities could be provided to link green/natural spaces within the research park to the wider area. This will help facilitate species movement and avoid habitat fragmentation that could potentially result from the development. Linkages could also be integrated into the design of Options 1 and 3.</p> <p>All three options include roads and parking areas, which reduce the amount of land available for habitat creation/green open spaces. However, Option 2 contains the least amount of separate parking areas, followed by Option 3. These options will require reduced amounts of road space to link parking areas within the circulation network. However, relative differences in the amount of road space between the options are uncertain.</p> <p>All detailed options have the potential to conflict with the achievement of Norfolk’s Biodiversity Action Plan (BAP) targets (e.g. there are a series of species action plans and habitat action plans that could be significantly affected by development at NRP). There is uncertainty associated with the significance of these effects, which are largely dependant on the results of the Phase 1 habitat survey, which was recommended from the broad options appraisal. However, linking natural spaces as suggested above (and under recommendations) could limit potential negative effects, and even contribute, to BAP targets.</p> <p>Conclusion: Option 2 is likely to make the most positive contribution to biodiversity in NRP and the wider area, given its setting within the landscape and the reduce number of separate car parking areas.</p>	<p>Score: ++/-/? Rank: 1</p>	<p>Score: +/-/? Rank: 2</p>	<p>Integrate ecological networks (including green patches and green corridors) within the research park.</p> <p>Incorporate ecosensitive edges to the research park and green spaces, especially next to water bodies, to facilitate the movement of species between habitats.</p> <p>Ensure the design layout maximises connectivity between green spaces in the research park and adjacent habitats.</p>
ENV2	<p>To reduce vulnerability to climate change, including</p>	<p>Score: --/? Rank: 3</p>	<p>Score: -/? Rank: 1</p>	<p>Score: -/? Rank: 2</p>	<p>Maintain the greenfield run-off rate through the</p>

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
		<p>All three options increase the area of impermeable surfaces, increasing the vulnerability to flooding events, which are predicted to be more frequent and severe due to climate change. Option 2 contains the least amount of separate parking areas, followed by Option 3. These options will require reduced amounts of road space to link parking areas within the circulation network, thereby reducing the area of impermeable surfaces compared with Option 1. However, relative differences in the amount of road space between the options are uncertain.</p> <p>The increased vulnerability to flooding under all three options could be mitigated by ensuring that surface water run-off is managed as close to its source as possible. The use of sustainable drainage systems (SuDS) should be promoted for development unless there are practical reasons for not doing so. Where practical reasons prevent the use of sustainable drainage techniques, the developer should seek to manage as much run-off as possible on site and explore sustainable methods of managing the remainder as close as possible to the site.</p> <p>All options have the potential to reduce vulnerability to warmer summers as a result of climate change. Careful orientation of buildings is vital for passive solar energy gains whilst also avoiding excessive solar gain in summer. For example, the main glazed elevation should be orientated within 30° of south with a correspondingly small amount of glazing on the north elevation. All buildings within the three options appear to be orientated 30° of south. However, it is important to ensure that the main glazed elevation is on the southern aspect while the elevation with the smallest amount of glazing is on the northern aspect of the building.</p> <p>Conclusion: Option 2 is likely to make the most positive contribution to reducing vulnerability to climate change given its reduced area of impermeable surfaces compared to the other options.</p>			
ENV3	<p>To maximise the use of renewable energy solutions and reduce contributions to climate change.</p> <p>(E.g. Will the option... contribute to achieving RAP</p>	<p>Score: + Rank: 3</p>	<p>Score: ++ Rank: 1</p>	<p>Score: ++ Rank: 2</p>	<p>Integrate renewable energy solutions into the scheme design.</p> <p>Encourage energy efficiency through sustainable design and</p>

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
		requirements. There are however opportunities to exceed these requirements and promote NRP as a carbon neutral development. Option 2, followed by Option 3, has larger open spaces. Larger open spaces are more able to accommodate renewable energy schemes, such as wind turbines, or more able to accommodate these schemes if not integrated into the initial scheme design. Conclusion: Option 2, followed by Option 3, performs the best against this SA objective, having greater opportunity to accommodate renewable energy schemes.			
ENV4	To reduce the effect of traffic on the environment. (E.g. Will the option... <ul style="list-style-type: none">• reduce traffic volumes?• reduce traffic congestion?	Score: --/? Rank: 3	Score: -/? Rank: 1	Score: -/? Rank: 2	Ensure that each phase of development, and the completed development, at NRP is well-served by public transport.
		All detailed options are expected to increase traffic generation to the site to access employment facilities and local facilities and services. The detailed options for the layout of development at the main site are likely to affect how workers travel to NRP. Option 1 includes development plots each with their own requisite quantum of parking.			
ENV5	To improve air quality and minimise noise, vibration and light pollution. (E.g. Will the option... <ul style="list-style-type: none">• reduce emissions of atmospheric pollution?• improve the ambience of local areas?)	Score: --/? Rank: 3	Score: -/? Rank: 1	Score: -/? Rank: 2	
		Any new development is likely to increase noise, vibration and light pollution during both the construction and operation phases compared to the existing predominantly agricultural use. These are likely to be mitigated by appropriate measures, however residual impacts are expected. Given that all detailed options comprise the same plot ratio, it is expected that residual impacts on air quality, noise, vibration and light pollution are likely to be similar for each option. As commented under SA objective ENV4, all detailed options are expected to increase traffic generation at NRP. This increase is expected to be lower under Options 2 and 3 compared to Option 1. Therefore, whilst all three options are likely to reduce air quality and result in an increase in noise and vibration from road traffic, these effects are expected to be less significant under Options 2 and 3. Conclusion: Option 2, followed by Option 3, performs the best against this SA objective.			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
ENV6	<p>To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect vulnerable and valued landscapes, or mitigate the effects of inappropriate development?• ensure that design is complementary to, or able to enhance, the character of local landscapes?• reduce the amount of derelict, degraded and under-used land?• preserve or enhance the District's heritage?)	<p>Score: -/? Rank: 3</p>	<p>Score: -/+/? Rank: 1</p>	<p>Score: -/+/? Rank: 1</p>	<p>Ensure that the phasing of development takes into account the character, quality and distinctiveness of the local landscape.</p>
		<p>The broad options appraisal identified negative impacts associated with development at NRP on the distinctiveness and quality of landscapes and townscapes. It was commented that the open and long views and the setting of the area could be compromised by further development at NRP.</p> <p>Option 1 has a conventional approach to site layout and so is unlikely to be sensitively designed and integrated into the local landscape framework. In contrast, Option 2 would be designed as a parkland type of development and would be set within a sweeping landscape. The design of Option 2 therefore takes into account the character of the local landscape and so is more likely to complement and potentially enhance the character of the area. Option 3 is a hybrid of Options 1 and 2 and so takes into account the local landscape framework. This Option also has the potential to compliment and enhance the character of the local landscape.</p> <p>However, there is uncertainty as to how the different phases of development at NRP under the different Options will affect the character of the landscape. This is particularly important for Option 2 which works with the local landscape as a complete entity. Developing NRP in phases under this Option could therefore conflict with maintaining the character of the landscape until the development has been completed.</p> <p>Conclusion: Option 2 is likely to perform the best against this SA objective in the long-term, whilst Option 3 is likely to perform the best in the short to medium term.</p>			
ENV7	<p>To minimise the loss of undeveloped land and conserve and improve the quality of soil resources.</p>	<p>Score: -- Rank: 3</p>	<p>Score: -- Rank: 1</p>	<p>Score: -- Rank: 2</p>	<p>Ensure that phasing of development leaves land packages favourable for ongoing agricultural use until developed</p>
		<p>All detailed options involve development on currently productive land which will reduce the use of soil resources in the area. All detailed options involve the same plot ratio and so are expected to result in similar levels of soil resource loss.</p>			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
		resources in the area. All detailed options comprise the same plot ratio and so are expected to result in the same quantum of loss of undeveloped land. However, Option 2 contains the least amount of separate parking areas, followed by Option 3, requiring reduced amounts of road space to link parking areas within the circulation network. Therefore, Options 2 and 3 have greater potential to integrate green open spaces within NRP and minimise the irreversible use of soil resources. However, relative differences in the amount of road space between the options are uncertain. Conclusion: Option 2 is likely to perform the best against this SA objective as it has the greatest potential to integrate green open spaces within NRP.			
ENV8	To improve water qualities and provide for sustainable sources of supply and sustainable use.	Score: --/? Rank: 3	Score: --/? Rank: 1	Score: --/? Rank: 2	Consider the incorporation of Sustainable Drainage Systems (SuDS) to help protect water quality.
		The broad options appraisal identified potential negative effects of development at NRP on water quality, e.g. through the contaminated run-off from developed areas. All three detailed options are expected to result in the same quantum of development at NRP, resulting in comparable risks			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
		<p>expected to result in the same quantum of development at NRP, resulting in comparable risks associated with polluting local waterbodies. However, Option 2 contains the least amount of separate parking areas, followed by Option 3. These options will require reduced amounts of road space to link parking areas within the circulation network and could discourage the use of the car to travel to NRP (as commented under SA objective ENV4). This would reduce the risk of contaminated run-off from the road network.</p> <p>As commented against SA objective ENV7, there is potential to incorporate larger areas of open space within Options 2 and 3. These have the potential to provide greater opportunities for the use of Sustainable Drainage Systems (as discussed under SA objective ENV2) which are beneficial to water quality.</p> <p>Development associated with each option is likely to increase the demand for water resources. Given that the current water supply network in the area around NRP has reached its capacity, any additional demand is likely to significantly affect water resources in the area. Given that the same amount of development is expected to be provided between options, the options are expected to give rise to comparable effect on water demand.</p> <p>Conclusion: Option 2 followed by Option 3 is likely to perform the best against this SA objective as it is expected to result in a lower risk of pollution to water bodies from roads.</p>			
ENV9	<p>To minimise the production of waste and increase recycling.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> result in less waste being produced or requiring disposal? facilitate better community recycling facilities?) 	<p>Score: -/?</p> <p>Rank: I</p>	<p>Score: -/?</p> <p>Rank: I</p>	<p>Score: -/?</p> <p>Rank: I</p>	<p>Ensure that recycling facilities are as accessible as other waste disposal facilities on site.</p> <p>Consider the use of recycled materials or materials available on site for construction purposes.</p>
		<p>Any new development is likely to increase the amount of waste requiring final disposal and so all three detailed options are likely to negatively influence this SA objective. However, assuming that existing policies in the South Norfolk Local Plan are taken into consideration, this negative influence is expected to be minimised. For example, Policy UTL14: Waste recycling and collection requires provision to be made to facilitate the storage, collection and recycling of waste likely to be generated by new development. All options are expected to give rise to the same level of minor negative impacts as they are all expected to have the same quantum of development.</p> <p>Conclusion: all detailed options are expected to perform the same in terms of minimising the production of waste and increasing recycling.</p>			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
Social					
S1	To provide everybody with the opportunity to live in a decent, suitable and affordable home. (E.g. Will the option... • reduce homelessness? • increase the range and affordability and quality of housing stock for all social groups?)	Score: 0 Rank: 0	Score: 0 Rank: 0	Score: 0 Rank: 0	
		The detailed options are not expected to affect the provision of decent, suitable or affordable housing.			
S2	To reduce poverty, inequality and social exclusion	Score: + Rank: 3	Score: + Rank: 1	Score: + Rank: 2	Ensure adequate facilities and services are provided as part of development at

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
Will the option...?					
<p>exclusion.</p> <p>(E.g. Will the option...)</p> <ul style="list-style-type: none"> • reduce poverty and social exclusion in those areas most?) 		<p>The broad options appraisal identified positive effects associated with development at NRP and reducing poverty, inequality and social exclusion: development is likely to increase employment provision in the area, improve education and skills of the working population, and improve access to local services and facilities, including the Norfolk and Norwich University Hospital.</p> <p>Given that the same opportunities are available in all of the detailed options, it could be argued that there would be little differentiation between them in terms of their affect on poverty, inequality and social exclusion. However, the building arrangement, blurred demarcation of plot perimeters and shared facilities in Options 2 and 3 are likely to encourage the integration and the mixing of employees from different research and development entities. This is likely to reduce social exclusion within the working population of NRP.</p> <p>Conclusion: Option 2 followed by Option 3 is expected to perform the most positively in terms of reducing poverty, inequality and social exclusion by encouraging the integration and mixing of people from different research and development entities.</p>			<p>as part of development at NRP. They should complement those that already exist in the area.</p> <p>Ensure that each phase of development at NRP allows for sufficient provision of services and facilities.</p> <p>Ensure services and facilities are appropriately located to ensure they satisfactorily serve the local community and those working at NRP.</p> <p>Ensure that new local services are adequately served by sustainable modes of transport.</p>
S3	To offer opportunities for all sections of the population to have rewarding and satisfying employment.	Score: ++ Rank: I	Score: ++ Rank: I	Score: ++ Rank: I	
		All detailed options are likely to have a significant positive effect on employment provision in the area as the development of allocated sites for research and development are expected to deliver job			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
	employment. (E.g. Will the option... <ul style="list-style-type: none">• reduce unemployment overall?• improve earnings?))	the development of allocated sites for research and development are expected to deliver job opportunities. Given that the same number and range of employment opportunities are provided in each of the detailed options, there is unlikely to be any differentiation between them in terms of their performance against this SA objective. Conclusion: all detailed options are expected to perform the same in terms of providing opportunities for all sections of the population to have rewarding and satisfying employment.			
S4	To improve accessibility to essential services, facilities and the workplace, particularly for those most in need. (E.g. Will the option... <ul style="list-style-type: none">• improve accessibility to key local services?))	Score: + Rank: 3	Score: + Rank: 1	Score: + Rank: 2	Ensure adequate facilities and services are provided as part of development at NRP. These facilities should complement those that already exist in the area. Ensure that each phase of development at NRP allows for sufficient provision of services and facilities. Ensure that new local services are adequately served by sustainable modes of transport.
		The broad options appraisal identified positive effects associated with development at NRP on this SA objective. It is assumed that development would result in the provision of additional services and facilities at NRP. This would improve accessibility to local services for residents living close to NRP and for employees working at NRP and the university. Assuming that all detailed options are likely to result in the same provision of services and facilities at NRP, these positive effects for residents are likely to be similar across options. However, there is uncertainty associated with this positive effect as the provision of facilities, and the proximity of services/facilities to public transport nodes/car parks is unknown. The building arrangement, blurred demarcation of plot perimeter and shared facilities in Options 2 and 3 are likely to encourage integration and the mixing of employees from different research and development entities. This is likely to improve accessibility to services and facilities for those working at NRP. This positive effect in the short to medium term however is largely dependant on the phasing of Option 2. Conclusion: Option 2 followed by Option 3 is expected to perform the most positively against this SA objective. Encouraging the integration and mixing of people from different research and development entities is likely to improve accessibility to services and facilities for those working at NRP.			
S5	To improve the education and skills of the population overall.	Score: + Rank: 1	Score: + Rank: 1	Score: + Rank: 1	

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
overall. (E.g. Will the option... <ul style="list-style-type: none">improve qualifications and skills of young people?)		The broad options appraisal identified positive effects associated with development at NRP and improving the education and skills of the working population in South Norfolk. It was suggested that the businesses that would be located at NRP would undertake research and development work, which would encourage the provision of highly skilled jobs. Given that all detailed options are likely to result in the same number and range of jobs, these positive effects are likely to be similar between options. Conclusion: All detailed options are expected to perform the same in terms of improving the education and skills of the population overall.			
S6	To improve the health of the population overall. (E.g. Will the option... <ul style="list-style-type: none">reduce death rates?improve access to high quality health facilities?encourage healthy lifestyles?)	Score: + Rank: 3	Score: + Rank: 1	Score: + Rank: 2	Ensure that open spaces are well designed and meet the needs of the local community, employees at NRP and other users of the open spaces. Ensure that appropriate open spaces are provided for each phase of the development at NRP. A range of outdoor spaces should be provided and should have appropriate shade and vegetation to ensure their usability during warmer summers (as a result of climate change).
		The broad options appraisal identified the positive effects associated with improving access to Norfolk and Norwich Hospital on the health of the population overall. It is expected that there will be provision of open spaces as part of the development under all three detailed options (see commentary under SA objective S8). This is likely to contribute to the quality of life and the health of those who work at NRP and live nearby. Given that Option 2, followed by Option 3, has greater potential to accommodate open spaces (given that they are both designed within a landscape context), it is likely that these options will more positively contribute to this SA objective. However, there is uncertainty associated with this assessment, as the quality of proposed open spaces and access to these open spaces is currently unknown. Conclusion: Option 2, followed by Option 3 is likely to more positively contribute to the health of the population overall as they have greater potential to accommodate open spaces.			
S7	To encourage local community identity and foster mixed communities	Score: + Rank: 1	Score: + Rank: 1	Score: + Rank: 1	Incorporate principles that help to design-out crime in the development.

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
<p>foster mixed communities with co-operative attitudes, helping to reduce anti-social activity.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce actual levels of crime/fear of crime? • encourage engagement in community activities?) 		<p>The broad options appraisal identified the positive effects associated with employment provision, improved education and skills, and improved access to local services and facilities on anti-social behaviour and crime. Given that the detailed options are expected to result in similar positive effects on these factors, these positive effects are likely to be similar between options.</p> <p>Conclusion: All detailed options are expected to perform the same in terms of encouraging local community identity and reducing anti-social activity.</p>			crime in the development.
S8	<p>To improve the quality of where people live.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • improve satisfaction of people with their neighbourhoods? • increase access to and provision of quality open space?) 	<p>Score: ++ Rank: 3</p>	<p>Score: ++ Rank: 1</p>	<p>Score: ++ Rank: 2</p>	<p>Ensure that open spaces are well designed and meet the needs of the local community, employees at NRP and other users of the open spaces.</p> <p>Ensure that appropriate open spaces are provided for each phase of the development at NRP.</p> <p>A range of outdoor spaces should be provided and should have appropriate shade and vegetation to ensure their usability during warmer summers (as a result of climate change).</p>
		<p>All of the detailed options are likely to increase employment provision and access to local services and facilities. These positive effects are likely to improve the satisfaction of local residents with their neighbourhood. However, the positive effects are largely dependant on the specific locations of facilities within NRP and their proximity to residential areas.</p> <p>Open space provision is also important in determining the quality of where people live and the satisfaction of people with their neighbourhoods. It is expected that there is greater potential to accommodate open spaces in Option 2, followed by Option 3, given that they are both designed around the local landscape. However, there is uncertainty associated with this assessment, as the quality of proposed open spaces and access to these open spaces is currently unknown.</p> <p>Conclusion: Option 2 is likely to perform the best against this SA objective.</p>			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
Economic					
EC1	To encourage sustained economic growth. (E.g. Will the option... • support emerging	Score: ++/? Rank: 3	Score: ++/? Rank: 2	Score: ++/? Rank: 1	
		All three detailed options are likely to encourage sustained economic growth by supporting emerging research employment uses in the District. NRP already plays a significant role in the South Norfolk and greater Norwich economy (e.g. existing institutes at NRP form part of just 5% of employers District-			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
	<p><i>employment uses in the District (e.g. Research, tourism)?</i></p> <ul style="list-style-type: none">• <i>help retain existing businesses?</i>• <i>aid farming diversification?)</i>	<p>greater Norwich economy (e.g. existing institutes at NRP form part of just 5% of employers District-wide with more than 25 employees). Expansion of the site under the three detailed options is likely to increase the number of jobs available both in research and development posts and support staff opportunities, and the status of the area as a business and research centre.</p> <p>However, the status of the area and its contribution to economic growth (especially in terms of encouraging new businesses to locate there) is likely to depend on, among other things, the design of buildings and the quality of, and stimulation provided by, the setting and layout of the research park. Whilst the design quality of individual buildings is likely to be similar between options, the layout of Option 2, and to a lesser extent Option 3, is more integrated with the surrounding landscape which is likely to improve the image of the area and encourage inward investment to the research park. This could more positively contribute to local economic growth compared to a conventional site layout, such as that described in Option 1.</p> <p>However, there is uncertainty as to how the phasing of development will affect how well the extension to NRP ‘works’. For example, under Option 1, components of the extension could be developed and operated separately which allows for the easy and successful phasing of development. However, Option 2 is less easily divided having a nominal demarcation of plot perimeters and parking provided in large communal car parks. This could negatively affect the successful operation of the extension until all phases have been completed. However, this negative effect is very uncertain.</p> <p>The status of the area and its contribution to economic growth is also likely to depend on its accessibility by a range of users, including car-users. Option 2, which provides parking away from some buildings, could limit inward investment from those employers who would like to use cars to access their place of work.</p> <p>Conclusion: Option 3 is likely to perform the best against this SA objective.</p>			
EC2	To encourage and accommodate both indigenous and inward investment promoting a positive image of the District	Score: ++/? Rank: 3	Score: ++/? Rank: 2	Score: ++/? Rank: 1	
		The three detailed options are likely to positively contribute to the SA objective of accommodating both indigenous and inward investment. They will provide additional employment locations, targeted at those businesses associated with the emerging industry of research and development.			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
	District. (E.g. Will the option... <ul style="list-style-type: none">provide for a variety of locations for businesses?add to a ready supply of employment premises?)	those businesses associated with the emerging industry of research and development. However, as discussed against SA objective EC1, the level to which NRP will encourage inward investment and promote a positive image of the District, is likely to depend on, among other things, the quality of, and stimulation provided by, the setting and layout of the research park. Given that Option 2, and to a lesser extent Option 3, is more integrated with the surrounding landscape and the environmental context of the area, these options are likely to more positively encourage inward investment and contribute to the positive image of the District. However, Option 2, which provides parking away from some buildings, could limit inward investment from employers who would like to use cars to access their place of work. Conclusion: On balance, Option 3 is likely to perform the best against this SA objective.			
EC3	To encourage efficient patterns of movement in support of economic growth. (E.g. Will the option... <ul style="list-style-type: none">encourage the development of local employment locations?minimise the journey to work?enhance a group of existing employment generating uses?encourage mixed use or live / work?)	Score: +/-/? Rank: 3	Score: +/-/? Rank: 1	Score: +/-/? Rank: 2	
		Development at NRP is likely to have a mixed effect on encouraging efficient patterns of movement in support of economic growth. On the positive side, development would enhance a group of existing employment generating uses. However, as discussed under SA objective ENV4, development at NRP is likely to increase car traffic to the site. Option 1 includes development plots each with their own requisite quantum of parking. Allocating parking in close proximity to their place of work will encourage those working at NRP to travel by car, increasing traffic volumes and congestion. Although Options 2 and 3 provide the same amount of parking, it is allocated in large communal car parks. Locating parking some distance from the buildings may encourage people to use public transport. Therefore, Options 2 and 3 could result in more sustainable patterns of movement to NRP. Conclusion: Option 2, followed by Option 3, performs the best against this SA objective, encouraging the most sustainable patterns of movement in support of economic growth.			

SA objective		Detailed options for main site			Recommendations
Question/decision-making criteria Will the option...?		1: Traditional development plots each with its own demarcated perimeter with in plot parking	2: Parkland development with nominal demarcation of plot perimeters and parking provided in large communal car parks	3: Hybrid option - blurred plot perimeters and parking shared between groups of buildings	
EC4	To improve the social and environmental performance of the economy. (E.g. Will the option... <ul style="list-style-type: none">offer the opportunity for more flexible working?operate in a way which seeks to minimise impact on the environment?))	Score: ? Rank: I	Score: ? Rank: I	Score: ? Rank: I	
	There is uncertainty associated with the effect of the detailed options on the social and environmental performance of the economy as the opportunity for flexible working and the operational impacts on the environment is currently unknown. Conclusion: All broad options are expected to perform the same in response to this SA objective, given the uncertainty associated with its effects.				
EC5	To improve the economic performance in rural areas. (E.g. Will the option... <ul style="list-style-type: none">encourage rural diversification?offer sources of employment in rural areas?improve electronic communication potential?))	Score: 0 Rank: 0	Score: 0 Rank: 0	Score: 0 Rank: 0	
	Given that NRP is located on the urban fringe of Norwich City, the detailed options are not expected to affect the economic performance of rural areas in South Norfolk.				

Appendix 10
Appraisal of Detailed Options for Colney Hall

Appraisal of Detailed Options for Colney site

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
Environment					
ENVI	To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation. (E.g. Will the option...	Score: +/-/? Rank: 1	Score: +/-/? Rank: 2	Score: +/-/? Rank: 3	Consider habitat creation and management, including: • Creation of fish free standing water bodies with value to breeding
		All three detailed options for the layout of the Colney Hall site have the potential to positively contribute to this SA objective through the creation/improvement of habitats. Option 1 concentrates the largest amount of development in existing developed areas and so has the greatest potential for integrating opportunities for wildlife in these areas and for improving existing undeveloped areas for			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
		<p>wildlife. The development of the site under all three options should ensure that linkages are maintained between habitats to facilitate species movement and avoid habitat fragmentation that could potentially result from the development.</p> <p>All detailed options also have the potential to negatively affect biodiversity and geodiversity. Land adjoining the River Yare within the estate boundary is designated as part of the Bowthorpe Riverside County Wildlife Site (a site of nature conservation interest and geologic/ geomorphologic value). This could be negatively affected by development at NRP, e.g. from run-off, disturbance during construction and operation of NRP, etc. Given that Option 3 involves a higher proportion of its development closer to County Wildlife Sites, this Option is likely to more negatively affect this designation.</p> <p>The Ecological Assessment at Colney Hall (Norfolk Wildlife Services Ltd, 2002) and the Colney Hall Ecological Appraisal (Applied Ecology Ltd, 2005) show that potential developable areas at Colney appear to affect habitats of only relatively low ecological and nature conservation value. The walled garden, pump house and Colney Hall site have the potential to support roosting bats and the latter two areas have evidence of supporting foraging badgers. The woodland areas, in particular the densely vegetated under-storey habitat and mature trees, have the potential to support a wide range of breeding bird species and the pine plantation supports a heronry.</p> <p>Therefore, all three options are likely to negatively affect biodiversity at Colney Hall, especially with respect to bats, badgers and birds. However, more detailed surveys need to be undertaken to identify effects on protected animal species, such as evidence of breeding birds and badger setts in densely vegetated woodland areas.</p> <p>Conclusion: Option 1 is expected to make the least negative contribution to biodiversity on the Colney Hall site.</p>			
ENV2	To reduce vulnerability to climate change, including minimising the risks from flooding.	Score: -/? Rank: I	Score: -/? Rank: I	Score: -/? Rank: I	Maintain the greenfield run-off rate through the use of SuDS. Ensure that where SuDS cannot be
		The Colney site does not lie within the Environment Agency flood risk zone 2 (low to medium risk with			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
Will the option...?					
		<p>an annual probability of flooding from rivers of less than 0.1%) or zone 3 (high risk with an annual probability of flooding of 1.0% or greater from rivers). However, these zones do border the site.</p> <p>All three options will increase the area of impermeable surfaces at Colney Hall contributing to surface water run-off, increasing the risk of flooding events, which are predicted to become more frequent and severe due to climate change. Given that the increase in these surfaces is likely to be similar among options, there is unlikely to be any differentiation between them in terms of their effect on increasing the risk of flooding.</p> <p>The increased vulnerability to flooding under all three options could be mitigated by ensuring that surface water run-off is managed as close to its source as possible. The use of sustainable drainage systems (SuDS) should be promoted for development unless there are practical reasons for not doing so. Where practical reasons prevent the use of sustainable drainage techniques, the developer should seek to manage as much run-off as possible on site and explore sustainable methods of managing the remainder as close as possible to the site.</p> <p>All options have the potential to reduce the vulnerability of new development to warmer summers as a result of climate change. Careful orientation of buildings is vital for passive solar energy gains whilst also avoiding excessive solar gain in summer. For example, the main glazed elevation should be orientated within 30° of south with a correspondingly small amount of glazing on the north elevation. All options include buildings with a range of orientations and so are expected to perform similarly in terms of their effect of reducing vulnerability to warmer summers. It is important to ensure that the main glazed elevation of buildings is on the southern aspect while the elevation with the smallest amount of glazing is on the northern aspect of the building.</p> <p>Conclusion: All options are expected to perform similarly in terms of reducing the vulnerability of the built environment to climate change.</p>			
ENV3	<p>To maximise the use of renewable energy solutions and reduce contributions to climate change.</p> <p>(E.g. Will the option... contribute to achieving RAB</p>	<p>Score: +/?</p> <p>Rank: I</p>	<p>Score: +/?</p> <p>Rank: I</p>	<p>Score: +/?</p> <p>Rank: I</p>	<p>Integrate renewable energy solutions into the scheme design.</p> <p>Encourage energy efficiency through sustainable design and</p>
		<p>All detailed options have the potential to use renewable energy solutions and reduce contributions to climate change. This is in line with regional planning policy. For example, Policy ENV8 of the East of England Plan requires all developments above a threshold of 1000 sqm to incorporate equipment for renewable energy power generation so as to provide at least 10% of their predicted energy</p>			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
		requirements. There are however opportunities to exceed these requirements and promote the site as a carbon neutral development. The acceptability of using some renewable energy technologies at Colney Hall, such as wind turbines, is uncertain given its historic setting. Therefore, the likelihood of the site being able to maximise the use of renewable energy solutions is uncertain. This uncertainty makes it difficult to differentiate between the options in terms of their performance against this SA objective. Conclusion: All options are expected to perform similarly against this SA objective, although there is uncertainty associated with this assessment.			
ENV4	To reduce the effect of traffic on the environment. (E.g. Will the option... <ul style="list-style-type: none">• reduce traffic volumes?• reduce traffic congestion?	Score: -/? Rank: 1	Score: -/? Rank: 1	Score: -/? Rank: 1	Ensure that each phase of development, and the completed development, at Colney Hall is well-served by public transport.
		All detailed options are expected to increase traffic generation to access employment facilities and local services provided on site. Given that the same quantum of development would be provided under each option, it is expected that they will all have a similar affect on traffic volumes and congestion. Parking is provided in close proximity to each potential development area which could encourage the use of the car rather than public transport. However, some of the development under Option 2 (assembly the			
ENV5	To improve air quality and minimise noise, vibration and light pollution. (E.g. Will the option... <ul style="list-style-type: none">• reduce emissions of atmospheric pollution?• improve the ambience of local areas?	Score: -/? Rank: 1	Score: -/? Rank: 1	Score: -/? Rank: 1	Integrate mitigation measures to reduce impacts of air quality, noise, vibration and light pollution on species, e.g. consider appropriate lighting to minimise impacts of night-time lighting on bats.
		Any new development is likely to increase noise, vibration and light pollution during both the construction and operation phases compared to the existing uses. These are likely to be mitigated by appropriate measures although residual impacts are expected. Given that all detailed options at Colney comprise the same quantum of development, it is expected that residual impacts on air quality, noise, vibration and light pollution are likely to be similar for each option. As commented under SA objective ENV4, all detailed options are expected to increase traffic generation at the Colney site (by similar volumes). This is likely to result in an increase in noise and vibration from road traffic. Conclusion: All options are expected to perform similarly against this SA objective.			
ENV6	To maintain and enhance the distinctiveness and quality of landscapes, townscapes and	Score: +/-/? Rank: 3	Score: +/-/? Rank: 2	Score: +/-/? Rank: 1	Ensure that design is complementary to and enhances the character of

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
	landscapes, townscapes and the historic environment. (E.g. Will the option... <ul style="list-style-type: none">• protect vulnerable and valued landscapes, or mitigate the effects of inappropriate development?• ensure that design is complementary to, or able to enhance, the character of local landscapes?• reduce the amount of derelict, degraded and under-used land?• preserve or enhance the District's heritage?)	Colney Hall is a Grade II listed building set within the remnant of a historic landscape (although it is not on the English Heritage Register of Parks and Gardens). The most significant historic element is, in many ways, the south-easterly prospect from the Hall. Whilst no buildings are located within this designated view, Options 1 and 2 both include some of their development around Colney Hall. This could negatively affect the setting of the Hall and the historic landscape setting. Option 3 includes a large proportion of its development towards the north of the allocation, which is likely to be more easily screened from the listed building and historic landscape. All options also have the potential to positively contribute to the landscape setting of Colney Hall. For example, the existing landscape could be improved through restoration and appropriate management which could help to promote habitat sustainability and diversity. Conclusion: Option 3 is likely to perform the least negatively against this SA objective, providing the greatest potential to screen development from Colney Hall and the historic landscape.			enhances the character of the remnant historic landscape. Restore and appropriately manage the landscape setting of Colney Hall
ENV7	To minimise the loss of undeveloped land and conserve and improve the quality of soil resources. (E.g. Will the option... <ul style="list-style-type: none">• avoid the use of productive agricultural land?• minimise the irreversible use of soil resources?)	Score: - Rank: 1	Score: - Rank: 2	Score: - Rank: 3	
		All detailed options involve some development on currently undeveloped land which will reduce the use of soil resources in the area. Whilst Options 1 and 2 include some development on already developed land (albeit small scale development), such as around the rose garden and pump house, Option 3 mainly comprises development in undeveloped areas (the coniferous plantation). Conclusion: Option 1 is likely to perform the least negatively against this SA objective having the least amount of development in currently undeveloped areas.			
ENV8	To improve water qualities and provide for sustainable sources of supply and sustainable use	Score: -- Rank: 1	Score: -- Rank: 1	Score: -- Rank: 3	Integrate SuDS wherever feasible to mitigate impacts on water quality.
		The broad options appraisal identified potential negative effects of development at NRP on water			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
		quality, e.g. through contaminated run-off from developed areas. All three detailed options are expected to result in the same quantum of development on the Colney site which are likely to result in comparable volumes of run-off. Given that Option 3 involves a higher proportion of its development closer to the River Yare and the Riverside County Wildlife Sites, this Option is likely to increase risks associated with development polluting local waterbodies. Conclusion: Options 1 and 2 are likely to perform the least negatively against this SA objective as they are expected to result in a lower risk of pollution to local water bodies.			
ENV9	To minimise the production of waste and increase recycling. (E.g. Will the option... <ul style="list-style-type: none">result in less waste being produced or requiring disposal?facilitate better community recycling facilities?)	Score: -/? Rank: I	Score: -/? Rank: I	Score: -/? Rank: I	Ensure that recycling facilities are as accessible as other waste disposal facilities on site. Consider the use of recycled materials or materials available on site for construction purposes. Implement waste management plans during construction which help
		Any new development is likely to increase the amount of waste requiring final disposal and so all detailed options for the Colney site are likely to negatively influence this SA objective. However, assuming that existing policies in the South Norfolk Local Plan are taken into consideration, this negative influence is expected to be minimised. For example, Policy UTL14: Waste recycling and collection requires provision to be made to facilitate the storage, collection and recycling of waste likely to be generated by new development. Both options are expected to give rise to the same level of minor negative impacts as they are all expected to have the same quantum of development. Conclusion: All detailed options are expected to perform the same in terms of minimising the production of waste and increasing recycling.			
Social					
S1	To provide everybody with the opportunity to live in a decent, suitable and affordable home.	Score: 0 Rank: 0	Score: 0 Rank: 0	Score: 0 Rank: 0	

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
	affordable home. (E.g. Will the option... <ul style="list-style-type: none">• reduce homelessness?• increase the range and affordability and quality of housing stock for all social groups?))	The detailed options are not expected to affect the provision of decent, suitable or affordable housing.			
S2	To reduce poverty, inequality and social exclusion. (E.g. Will the option... <ul style="list-style-type: none">• reduce poverty and social exclusion in those areas most?))	Score: + Rank: I	Score: + Rank: I	Score: + Rank: I	Ensure access for people with disabilities.
		The broad options appraisal identified positive effects associated with development at NRP and reducing poverty, inequality and social exclusion. For example, development is likely to increase employment provision in the area, improve education and skills of the working population, and improve access to local services and facilities (assuming that these will be provided at Colney Hall). Given that the same opportunities are available in all of the detailed options, there is expected to be little differentiation between the options in terms of poverty, inequality and social exclusion. Conclusion: All options are expected to perform similar against this SA objective.			
S3	To offer opportunities for all sections of the population to have rewarding and satisfying employment. (E.g. Will the option... <ul style="list-style-type: none">• reduce unemployment overall?• improve earnings?))	Score: ++ Rank: I	Score: ++ Rank: I	Score: ++ Rank: I	Ensure access for people with disabilities.
		All three detailed options are likely to have a significant positive effect on employment provision in the area as the development of allocated sites for research and development are expected to deliver job opportunities. Given that the same number and range of employment opportunities are provided in all detailed options, there is unlikely to be any differentiation between them in terms of their performance against this SA objective. Conclusion: All detailed options are expected to perform the same in terms of providing opportunities for all sections of the population to have rewarding and satisfying employment.			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
S4	<p>To improve accessibility to essential services, facilities and the workplace, particularly for those most in need.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">improve accessibility to key local services?)	<p>Score: + Rank: I</p>	<p>Score: + Rank: I</p>	<p>Score: + Rank: I</p>	<p>Ensure adequate services and facilities are provided as part of development at Colney Hall.</p>
		<p>Whilst the broad options appraisal identified positive effects associated with development at NRP on this SA objective, these effects are not likely to be as significant for development at Colney Hall as for the rest of NRP. For example, whilst it is likely to improve the provision of services and facilities in the local area, it is not likely to improve access to the Norfolk and Norwich University Hospital, improve accessibility to services for residents living close by (given the absence of neighbouring developments) or for employees working at the university. Therefore, the positive effects are largely limited to improving accessibility to local services for employees working at Colney Hall.</p> <p>Assuming that all detailed options are likely to result in the same provision of services and facilities at Colney Hall, these positive effects for employees are likely to be similar across options. However, there is uncertainty associated with this appraisal as the provision of facilities and the proximity of services/facilities to public transport nodes/car parks is unknown.</p> <p>Conclusion: Option 3 is expected to perform the most positively against this SA objective. Encouraging the integration and mixing of people from different research and development entities is likely to improve accessibility to services and facilities for those working at Colney Hall.</p>			
S5	<p>To improve the education and skills of the population overall.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">improve qualifications and skills of young people?)	<p>Score: + Rank: I</p>	<p>Score: + Rank: I</p>	<p>Score: + Rank: I</p>	
		<p>The broad options appraisal identified positive effects associated with development at NRP and improving the education and skills of the working population in South Norfolk. It was suggested that the businesses that would be located at NRP would undertake research and development work, which would encourage the provision of highly skilled jobs. Given that all three detailed options are likely to result in the same number and range of jobs, these positive effects are likely to be similar between options.</p> <p>Conclusion: All of the detailed options are expected to perform the same in terms of improving the education and skills of the population overall.</p>			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
S6	To improve the health of the population overall. (E.g. Will the option... <ul style="list-style-type: none">• reduce death rates?• improve access to high quality health facilities?• encourage healthy lifestyles?)	Score: + Rank: I	Score: + Rank: I	Score: + Rank: I	Ensure that open spaces are well designed and meet the needs of employees of the Colney site.
		It is expected that there will be provision of open spaces as part of the development under all three options. This is likely to contribute to the quality of life and the health of those who work at NRP, especially as there is a general lack of open space for recreation needs (given the distance from Earlham Park, the University playing fields, etc). All of the options also have potential to link open spaces to the landscape framework of Colney Hall. Conclusion: All of the detailed options are expected to perform the same in terms of improving the health of the population overall.			Ensure that appropriate open spaces are provided for each phase of the development at NRP. A range of outdoor spaces should be provided and should have appropriate shade and vegetation to ensure their usability during warmer summers (as a result of climate change).
S7	To encourage local community identity and foster mixed communities with co-operative attitudes, helping to reduce anti-social activity. (E.g. Will the option... <ul style="list-style-type: none">• reduce actual levels of crime/fear of crime?• encourage engagement in community activities?)	Score: + Rank: I	Score: + Rank: I	Score: + Rank: I	Incorporate principles that help to design-out crime in the development.
		The broad options appraisal identified positive effects associated with employment provision, improved education and skills, and improved access to local services and facilities on anti-social behaviour and crime. Given that the detailed options are expected to result in similar positive effects on these factors, these positive effects are likely to be similar between options. Conclusion: All detailed options are expected to perform the same in terms of encouraging local community identity and reducing anti-social activity.			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
S8	To improve the quality of where people live. (E.g. Will the option... <ul style="list-style-type: none">improve satisfaction of people with their neighbourhoods?increase access to and provision of quality open space?)	Score: + Rank: I	Score: + Rank: I	Score: + Rank: I	
		All of the detailed options are likely to increase employment provision in the area which is likely to improve the satisfaction of local residents with their neighbourhood. Although the options are also expected to provide local services and facilities and incorporate open spaces, which would improve the satisfaction of residents with their neighbourhood, it is expected that these would be used by those working at the site given the general absence of neighbouring developments. Therefore, these facilities are unlikely to significantly contribute to the quality of where people live. Conclusion: All detailed options are expected to perform the same in terms of encouraging local community identity and reducing anti-social activity.			
Economic					
EC1	To encourage sustained economic growth. (E.g. Will the option... <ul style="list-style-type: none">support emerging employment uses in the District (e.g. Research, tourism)?help retain existing businesses?aid farming diversification?)	Score: ++ Rank: I	Score: ++ Rank: I	Score: ++ Rank: I	
		All three detailed options are likely to encourage sustained economic growth by supporting emerging research employment uses in the District. Development of the site under the three detailed options is likely to increase the number of jobs available both in research and development posts and support staff opportunities, and the status of the area as a business and research centre. Given that all detailed options have the same quantum of development, are likely to result in a similar design and quality of buildings, and are all located within a historic landscape setting, the contribution to economic growth between options is expected to be similar. Conclusion: All options are expected to perform similarly in terms of encouraging sustained economic growth.			
EC2	To encourage and accommodate both indigenous and inward investment promoting a positive image of the District	Score: + Rank: I	Score: + Rank: I	Score: + Rank: I	
		The three detailed options are likely to positively contribute to the SA objective of accommodating both indigenous and inward investment. They will provide additional employment locations, targeted at those businesses associated with the emerging industry of research and development.			

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
	District. (E.g. Will the option... <ul style="list-style-type: none">provide for a variety of locations for businesses?add to a ready supply of employment premises?)	those businesses associated with the emerging industry of research and development. Given that all options are likely to result in a similar design and quality of buildings, and are all located within a historic landscape setting, their contribution to the positive image of the District is likely to be similar. Conclusion: All options are expected to perform similarly in terms of encouraging investment and promoting a positive image of the District.			
EC3	To encourage efficient patterns of movement in support of economic growth. (E.g. Will the option... <ul style="list-style-type: none">encourage the development of local employment locations?minimise the journey to work?enhance a group of existing employment generating uses?encourage mixed use or live / work?)	Score: +/-/? Rank: I	Score: +/-/? Rank: I	Score: +/-/? Rank: I	
		Development at Colney Hall is likely to have a mixed effect on encouraging efficient patterns of movement in support of economic growth. On the positive side, development would enhance and extend a group of existing employment generating uses. However, as discussed under SA objective ENV4, development at Colney Hall is likely to increase car traffic to the site. Each option provides parking in close proximity to proposed buildings. Allocating parking in this way will encourage those working at Colney Hall to travel by car, increasing traffic volumes and congestion. However, some of the development under Option 3 (notably the northern most development in the coniferous plantation) is some distance from the parking area provided to the south. It is likely that increasing the distance between parking areas and buildings may encourage those who work at Colney to use public transport. However, this effect is uncertain given the distances involved on the Colney site and, in part, depends on accessibility to the site by public transport. Conclusion: All options are expected to perform similarly against this SA objective.			
EC4	To improve the social and environmental performance of the economy	Score: ? Rank: I	Score: ? Rank: I	Score: ? Rank: I	Encourage environmentally and socially positive businesses

SA objective		Detailed options for Colney site			Recommendations
Question/decision-making criteria Will the option...?		1: Extension to Hall, development in rose garden, walled garden, at pump house and within plantation	2: Reduced Hall extension and additional development in plantation	3: Majority of development taking place in plantation and some at pump house	
	of the economy. (E.g. Will the option... <ul style="list-style-type: none">offer the opportunity for more flexible working?operate in a way which seeks to minimise impact on the environment?)	There is uncertainty associated with the effect of the detailed options on the social and environmental performance of the economy as the opportunity for flexible working and the operational impacts on the environment is currently unknown. Conclusion: All three detailed options are expected to perform the same in response to this SA objective, given the uncertainty associated with its effects.			socially positive businesses to establish at NRP.
EC5	To improve the economic performance in rural areas. (E.g. Will the option... <ul style="list-style-type: none">encourage rural diversification?offer sources of employment in rural areas?improve electronic communication potential?)	Score: 0 Rank: 0	Score: Rank:	Score: 0 Rank: 0	Encourage businesses related to the rural industry (e.g. food related businesses) to establish at NRP.
		Given that NRP is located on the urban fringe of Norwich City, the detailed options are not expected to affect the economic performance of rural areas in South Norfolk.			

Appendix I I
Appraisal of the Vision and Objectives
of the NRP Development Brief SPD

Appraisal of the Vision and Objectives of the NRP Development Brief SPD against SA framework objectives

58. The symbols that were used to assess the Vision and Objectives are set out in the table below.

Key to Appraisal Symbols for the Vision and Objectives

Score	Description
✓	Potential compatible with SA objective and Vision/Objectives
X	Potential incompatible with SA objective and Vision/Objectives
0	Not covered by Vision/Objectives
-	Not relevant to SA objective
?	Uncertain effects

SA objective		Vision	Objectives				
			Implement allocations in Local Plan	Provide developer and landowner certainty	Enhance efficiency of the planning process	Promote high-quality design and innovation	Reflect physical constraints and opportunities
Environment							
ENV1	To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.	0	?	-	-	✓	✓
ENV2	To reduce vulnerability to climate change, including minimising the risks from flooding.	0	?	-	-	✓	✓

SA objective		Vision	Objectives				
			Implement allocations in Local Plan	Provide developer and landowner certainty	Enhance efficiency of the planning process	Promote high-quality design and innovation	Reflect physical constraints and opportunities
ENV3	To maximise the use of renewable energy solutions and reduce contributions to climate change.	✓	?	-	-	✓	✓
ENV4	To reduce the effect of traffic on the environment.	0	X	-	-	0	0
ENV5	To improve air quality and minimise noise, vibration and light pollution.	0	?	-	-	✓	✓
ENV6	To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment	✓	?	-	-	✓	✓
ENV7	To minimise the loss of undeveloped land and conserve and improve the quality of soil resources.	X	X	-	-	✓	✓
ENV8	To improve water qualities and provide for sustainable sources of supply and sustainable use	0	X	-	-	✓	✓
ENV9	To minimise the production of waste and increase recycling	0	X	-	-	✓	0
Social							
SI	To provide everybody with the opportunity to live in a decent, suitable and affordable home	-	-	-	-	-	-

SA objective		Vision	Objectives				
			Implement allocations in Local Plan	Provide developer and landowner certainty	Enhance efficiency of the planning process	Promote high-quality design and innovation	Reflect physical constraints and opportunities
S2	To reduce poverty, inequality and social exclusion.	✓	✓	-	-	✓	✓
S3	To offer opportunities for all sections of the population to have rewarding and satisfying employment.	✓	✓	-	-	-	-
S4	To improve accessibility to essential services, facilities and the workplace, particularly for those most in need.	✓	✓	-	-	-	✓
S5	To improve the education and skills of the population overall.	✓	✓	-	-	-	-
S6	To improve the health of the population overall.	✓	-	-	-	✓	-
S7	To encourage local community identity and foster mixed communities with co-operative attitudes, helping to reduce anti-social activity.	✓	?	-	-	✓	✓
S8	To improve the quality of where people live.	✓	?	-	-	✓	✓
Economic							
EC1	To encourage sustained economic growth.	✓	✓	✓	✓	✓	✓
EC2	To encourage and accommodate both indigenous and inward	✓	✓	✓	✓	✓	✓

SA objective		Vision	Objectives				
			Implement allocations in Local Plan	Provide developer and landowner certainty	Enhance efficiency of the planning process	Promote high-quality design and innovation	Reflect physical constraints and opportunities
	investment promoting a positive image of the District.						
EC3	To encourage efficient patterns of movement in support of economic growth.	0	?	-	-	-	-
EC4	To improve the social and environmental performance of the economy.	0	?	-	-	-	-
EC5	To improve the economic performance in rural areas.	-	-	-	-	-	-

Appendix I2
Appraisal of the NRP Development Brief SPD
Design Principles

Appraisal of the NRP Development Brief SPD Design Principles

SA objective Question/decision-making criteria Will the option...?		Design Principles											Commentary
		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Environment													
ENVI	<p>To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect sites of nature conservation value from inappropriate development?• increase the number or diversity of sites of nature conservation interest?• bring negative effects to designated sites and what would this involve?• adversely affect sites of geological interest?• contribute to achieving BAP targets?)	+/?	0	0	-	0	0	0	-	0	++	+	<p>The broad and detailed options appraisals concluded that development at NRP could have positive and negative impacts on local biodiversity. The Design Principles within the Development Brief have the potential to maximise some of the positive impacts identified in these appraisals (scored +/++) and others which have the potential to reduce the significance of some of the likely positive impacts (scored -/--). The Design Principles are not likely to impact the adverse effects identified.</p> <p>Maximising positive impacts</p> <p>The ‘Lighting and Security’ section recommends that where access to the perimeter needs to be controlled, developers should consider the use of naturalised features such as ditches, hedges, woodland strips and ha-has which should be fully integrated into the overall landscape. This is likely to positively contribute to biodiversity in the area and could provide movement corridors for wildlife. Similarly, the ‘Sustainable Drainage’ section requires developers to minimise and attenuate surface water run-off through the use of sustainable drainage systems which should, where possible, provide biodiversity benefits. This is likely to create habitats, contributing to the achievement of BAP targets.</p> <p>The ‘Breeam’ Design Principles require buildings to achieve an ‘Excellent’ rating under Breeam, which has the potential to</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria Will the option...?		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
													<p>positively contribute to this SA objective. Breeam includes 'Land Use and Ecology' as an assessment criteria and awards points for factors such as ecological enhancement, protection of ecological features, etc. However, it is possible for a building to receive an 'Excellent' Breeam rating without incorporating these elements. Therefore, there is no certainty that meeting the 'Breeam' Design Principles will significantly contribute to this SA objective.</p> <p>Reducing significance of positive impacts</p> <p>The 'Building Layout' section does not take into account the need to consider open space, habitat creation or wildlife corridors in the placing of buildings. In addition, the 'Landscape within plots' section does not specifically refer to the use of landscaping to provide biodiversity benefits (although this is illustrated in Figure 4.11).</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Incorporate the consideration of open space, habitat creation and wildlife corridors in 'Building Layout'. • Ensure that 'Landscape within plots' promotes the biodiversity benefits associated with a landscape plan.
ENV2	<p>To reduce vulnerability to climate change, including minimising the risks from flooding.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • adversely affect sites of 	0	++	0	+	++	0	0	++	-	+	0	<p>The broad and detailed options appraisals concluded that development at NRP could have negative impacts on this SA objective. The Development Brief includes a number of Design Principles that will mitigate some of these impacts (scored +/++). There are additional measures that could be taken to further contribute to this SA objective (for which the relevant Design Principle(s) has been scored -/--).</p>

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
<p><i>geological interest?</i></p> <ul style="list-style-type: none"> contribute to achieving BAP targets? 												<p>Reducing vulnerability to climate change</p> <p>The Design principles promote a number of actions that will help to reduce the vulnerability of NRP to climate change. These include:</p> <ul style="list-style-type: none"> A 'Climate Change' section which requires buildings to make allowances for anticipated climate changes. It seeks to ensure buildings maximise water conservation, natural ventilation and maintain a comfortable internal temperature. The 'Building Layout' section promotes flexibility in the internal organisation of buildings. Flexibility is a key principle in ensuring that buildings are adequately adapted to climate change. The 'Size and Massing' section recommends that buildings are orientated to maximise the benefits of natural daylight throughout the year and reduce the effects of solar gain. This is likely to play an important role in regulating the temperature of buildings and reducing the need to artificially heat and cool them. The 'Landscape within Plots' section states that landscaping should create shade to modify climate and create useable exterior environments and anticipate likely climate change. The Design Principles require the sizing of drainage systems to anticipate more violent rainfall events predicted through climate change ('Sustainable Drainage' section). <p>Additional measures</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<p>The Development Brief expects walk times of up to five minutes from a car park to a building (para. 4.32 'Parking, Service Access and Services' section). Design Principles should seek to ensure that this walk is climate proofed so that walkers are protected from both increased summer temperatures and more intense rainfall events during winter.</p> <p>Recommendations</p> <ul style="list-style-type: none"> Ensure walk journeys between car parks and buildings are fully adapted to climate change.
ENV3	<p>To maximise the use of renewable energy solutions and reduce contributions to climate change.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> contribute to achieving BAP targets? encourage efficient use of energy? promote a sequential approach to the pattern of development? reduce the emissions of greenhouse gases, including from traffic? 	+/?	++	+	0	+	+/-	0	-	--	0	+	<p>The broad and detailed options appraisals concluded that development at NRP could have positive impacts on this SA objective. The Development Brief includes a number of Design Principles that will maximise some of the positive impacts (scored +/++). There are additional measures that could be taken to further contribute to this SA objective (for which the relevant Design Principle(s) has been scored -/--).</p> <p>Maximising positive impacts</p> <p>The Development Brief promotes a number of actions that seek to increase the use of renewable energy solutions and reduce contributions to climate change. These include:</p> <ul style="list-style-type: none"> A 'Climate Change' section which requires planning applications to include a full energy audit of their proposals, demonstrating measures to reduce carbon emissions. By having an overall aspiration of development at NRP to achieve carbon neutrality over the life-time of the development, the Development Brief is likely to have a significant positive effect in maximising

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
												<p>the use of renewable energy.</p> <ul style="list-style-type: none"> • The 'Breeam' Design Principles require buildings to achieve an 'Excellent' rating under Breeam, which has the potential to positively contribute to this SA objective. Breeam includes 'Energy' as an assessment criteria and awards points for reducing carbon dioxide emissions. However, it is possible for a building to receive an 'Excellent' Breeam rating without incorporating such elements. Therefore, there is no certainty that meeting the 'Breeam' Design Principles will significantly contribute to this SA objective. • The section on 'Building Performance' requires developers to explore methods to meet and beat current best practice in the use of renewable energy sources. • The section on 'Size and Massing of Buildings' requires the judicious use of shading. This will contribute to energy efficiency by reducing the requirement for air conditioning, thus reducing contributions to climate change. • The 'Building Materials' section recommends that, where possible, consideration should be given to the use of local materials. This will contribute to this SA objective, by minimising the transport emissions associated with construction. However, the energy audit set out in the 'Climate Change' section requires embodied energy to be measured, which should include energy required to transport materials. This may identify materials that are transported from further afield but have a lower amount

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
												<p>of embodied energy.</p> <ul style="list-style-type: none"> The 'Lighting and Security' section states that light fittings should operate on demand where appropriate. This is likely to encourage energy efficiency, reducing emissions of carbon dioxide associated with electricity generation. This positive effect could be improved by providing 'switch off' reminder signs near light switches to ensure they are not left on when not required. <p>Additional measures</p> <p>The 'Building Materials' section should ensure that building materials are thermally efficient (i.e. help to regulate the internal temperature of buildings). In addition, 'Landscape within Plots' should ensure that landscape plans consider the integration of renewable energy solutions where appropriate.</p> <p>The section on 'Parking, Service Access and Services' states that undue weight should not be given to vehicular access. However, providing parking will negatively contribute to this SA objective, increasing contributions to climate change (as set out in the assessment of the broad options appraisal).</p> <p>Recommendations</p> <ul style="list-style-type: none"> Ensure the 'Building Materials' section refers to the use of materials that are thermally efficient (i.e. help to regulate the internal temperature of buildings). Ensure landscape plans referred to in the section on 'Landscape within Plots' consider the integration of renewable energy solutions where appropriate.

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
ENV4	<p>To reduce the effect of traffic on the environment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce traffic volumes? • reduce traffic congestion? • reduce the effect of HGV traffic on people and the environment? • increase the % of journeys using non-car modes? 	+/?	+/?	0	0	0	+	0	0	--	0	0	<p>The broad and detailed options appraisal concluded that development at NRP would have a negative effect on this SA objective as it would increase traffic generation to access employment facilities and local services provided on site. Having identified this impact, the Development Brief includes a number of design principles that will mitigate some of these effects (scored +/++) and others that will further contribute to these negative impacts (scored -/--).</p> <p>Mitigating negative impacts</p> <p>The 'Climate Change' section requires planning applications to include a full energy audit of their proposals, demonstrating measures to reduce carbon emissions. Assuming that this energy audit includes energy involved in transporting materials and workers during construction and operation, it could help to reduce the effect of traffic on the environment. However, the inclusion of transport emissions in the energy audit should be made explicit in the Development Brief.</p> <p>The 'Breeam' Design Principles require buildings to achieve an 'Excellent' rating under Breeam, which has the potential to positively contribute to this SA objective. Breeam includes 'Traffic' as an assessment criteria and awards points for reducing carbon dioxide emission from the transport sector (e.g. providing cycling facilities). However, it is possible for a building to receive an 'Excellent' Breeam rating without incorporating these measures. Therefore, there is no certainty that meeting the 'Breeam' Design Principles will significantly contribute to this SA objective.</p>

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
												<p>The 'Building Materials' section recommends that, where possible, consideration should be given to the use of local materials. This will positively contribute to this SA objective, reducing the effect of transport on the environment.</p> <p>Contributing to negative impacts</p> <p>The 'Parking, Service Access and Services' section of the Development Brief includes a number of measures to improve the parking environment at NRP (e.g. having a positive experience so that walks between car parks and buildings are acceptable). This is likely to encourage employees to drive to NRP, negatively affecting this SA objective. However, this does need to be considered in the context of the circulation plan (Figure 3.2) which includes a pedestrian and cycle network linked to existing routes.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Ensure transport emissions are considered in the energy audit which is required to accompany planning applications. • The 'Parking, Service Access and Services' section should encourage the use of sustainable modes of transport by providing secure parking for bicycles. This section should also refer to the development of pedestrian and cycle networks in NRP linked to existing routes (as set out in the circulation plan of the Development Brief) and to the provision of public transport improvements (as set out in Figure 1.5 of the Development Brief).

SA objective		Design Principles											Commentary
Question/decision-making criteria Will the option...?		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
ENV5	<p>To improve air quality and minimise noise, vibration and light pollution.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce emissions of atmospheric pollution? • improve the ambience of local areas? 	+/?	0	0	0	0	-	0	0	-	0	+	<p>The broad and detailed options appraisals concluded that development at NRP would have a negative effect on this SA objective as any development is likely to increase noise, vibration and light pollution during the construction and operation phases. The Development Brief includes a number of Design Principles that will mitigate some of these impacts (scored +/++) and others that will further contribute to these negative impacts (scored -/--).</p> <p>Mitigating negative impacts</p> <p>The Section of the Development Brief on 'Lighting and Security' requires lighting to be carefully controlled to minimise light spillage and glare. This is likely to mitigate the potentially negative impact of development at NRP on light pollution.</p> <p>The 'Breeam' Design Principles require buildings to achieve an 'Excellent' rating under Breeam, which has the potential to positively contribute to this SA objective. Breeam includes 'Pollution' as an assessment criterion which awards points for minimising pollutants. However, it is possible for a developer to achieve an 'Excellent' rating without scoring well on 'Pollution'. Therefore, there is no certainty that meeting the 'Breeam' Design Principles will significantly contribute to this SA objective.</p> <p>Contributing to negative impacts/additional measures</p> <p>The 'Building Materials' section of the Development Brief discusses the existence and visual impact of flues. However, it does not make reference to the effect of flues on air</p>

SA objective Question/decision-making criteria Will the option...?		Design Principles											Commentary
		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
													<p>quality. This is likely to have a negative impact on this SA objective.</p> <p>As commented under SA objective ENV4, the ‘Parking, Service Access and Services’ section includes a number of measures to improve the parking environment at NRP which is likely to encourage employees to drive to NRP. This is likely to increase traffic generation at NRP, negatively affecting this SA objective. However, this potential increase needs to be considered in the context of the circulation plan which include a pedestrian and cycle network linked to existing routes.</p> <p>Recommendations</p> <ul style="list-style-type: none">• Ensure the effect of flue location/type on air quality is considered in the Development Brief.• The ‘Parking, Service Access and Services’ section should encourage the use of sustainable modes of transport by providing secure parking for bicycles. This section should also refer to the development of pedestrian and cycle networks in NRP linked to existing routes (as set out in the circulation plan of the Development Brief) and to the provision of public transport improvements (as set out in Figure I.5 of the Development Brief).
ENV6	To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment.	+/?	0	0	0	0	+/-	+	++	+	+	+	<p>The broad and detailed options appraisals concluded that development at NRP would have both positive and negative effects on this SA objective. The Development Brief includes a number of Design Principles that will mitigate some of the negative impacts or maximise some of the positive impacts (scored +/++). Additional measures could</p>

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
<p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • protect vulnerable and valued landscapes, or mitigate the effects of inappropriate development? • ensure that design is complementary to, or able to enhance, the character of local landscapes? • reduce the amount of derelict, degraded and under-used land? • preserve or enhance the District's heritage? 												<p>also be specified in the Development Brief (scored -/--).</p> <p>The Design Principles promote a number of actions that seek to protect and enhance the landscape. These include:</p> <ul style="list-style-type: none"> • The 'Breeam' section recommends that developers extend Breeam aspirations to external treatments. This is likely to contribute to a quality landscape. However, this could be further improved by ensuring that external treatments take into account the local landscape. • 'Building Materials' states that, where possible, consideration should be given to the sourcing of local materials. This will contribute to the protection and maintenance of the local landscape/townscape. Further benefit could be added by ensuring that consideration is given to the local townscape. • The Development Brief encourages the provision of landmark elements which could include distinguishing architectural features (discussed in the 'Landmark Elements and Spatial Variation' section). This is likely to enhance the distinctiveness of the local landscape and townscape. • The 'Landscape within Plots' section requires all planning applications to include a landscape plan. This should consider the use of locally sourced materials and should respond to existing landscape character and key landscape elements. This is likely to positively contribute to the distinctiveness of the local landscape. • 'Parking, Service Access and Services' requires car parks to have good perimeter screening to minimise their

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<p>impact on the local landscape.</p> <ul style="list-style-type: none"> The section on 'Sustainable Drainage' seeks to integrate sustainable drainage systems which are designed to provide landscape benefits. The Development Brief requires access points to be controlled by naturalised features such as ditches/water bodies, woodland strips or ha-has (as discussed under 'Lighting and Security'). Whilst these should be integrated into the overall plot's landscape treatment, further benefit could be added by ensuring that it also integrates with the wider landscape. <p>Recommendations</p> <ul style="list-style-type: none"> Ensure that building materials relate to the local townscape characteristics (in the 'Building Materials' section). Ensure that naturalised features controlling access points are integrated into the wider landscape (in the 'Lighting and Security' section).
ENV7	<p>To minimise the loss of undeveloped land and conserve and improve the quality of soil resources.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> avoid the use of productive agricultural land? 	0	0	0	0	0	0	0	0	0	0	0	<p>The broad and detailed options appraisals concluded that development at NRP would have negative effects on this SA objective as it would involve development on currently productive land. The Design Principles are not likely to affect this conclusion.</p>

SA objective Question/decision-making criteria Will the option...?		Design Principles											Commentary
		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
	<ul style="list-style-type: none">minimise the irreversible use of soil resources?												
ENV8	<p>To improve water qualities and provide for sustainable sources of supply and sustainable use.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">incorporate Sustainable Urban Drainage Systems?reduce water consumption?ensure that the supply of water be efficient in terms of the overall network?	+/?	++	0	0	0	0	0	+/-	0	++	0	<p>The broad and detailed options appraisal concluded that development at NRP would have a negative effect on this SA objective as it would increase demand for water resources and increase the potential for water contamination. The Development Brief includes a number of design principles that will mitigate some of these effects (scored +/++). However, some of the Design Principles could include additional measures that would contribute to this SA objective (and have therefore received a score of -/--).</p> <p>Mitigating negative impacts</p> <p>The Design Principles that will mitigate some of the negative impacts identified in the broad and detailed options appraisals include:</p> <ul style="list-style-type: none">The ‘Climate Change’ section requires developers to maximise water conservation in buildings at NRP. This is likely to contribute to the sustainable use of water.The ‘Sustainable Drainage’ section requires developers to incorporate sustainable drainage systems at NRP. These will help to regulate water quality, reducing the opportunity for water contamination. This section also requires developers to consider the use of rainwater harvesting at NRP. This would help to reduce demand of water from treated supplies.The ‘Breeam’ Design Principles require buildings to achieve an ‘Excellent’ rating under Breeam, which has the potential to positively contribute to this SA

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<p>objective. Breeam includes 'Water' as an assessment criteria and awards points for reducing water consumption. However, it is possible for a building to receive an 'Excellent' Breeam rating without scoring well on 'Water'. Therefore, there is no certainty that meeting the Breeam Design Principles will significantly contribute to this SA objective.</p> <p>Additional measures</p> <p>The 'Landscape within Plots' section already specifies that landscaping schemes should anticipate likely climate change. This is likely to result in schemes that would require minimal irrigation. However, specific measures could be included in this section to ensure that water consumption is kept to a minimum in the landscaped areas, e.g. consideration given to the choice of planting species to those requiring no irrigation, designing water features to minimise water consumption, etc.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Make specific references in the 'Landscape within Plots' section to ensure water consumption is kept to a minimum in landscaped areas. • Strengthen the section on rainwater harvesting, requiring developers to integrate these measures where practicable. If rainwater harvesting has not been integrated in a scheme design, developers should set out the reasons why.
ENV9	To minimise the	0	0	0	0	0	-	0	-	+/-	0	0	The broad and detailed options appraisal concluded that

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
<p>production of waste and increase recycling.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> result in less waste being produced or requiring disposal? facilitate better community recycling facilities? 												<p>development at NRP would have a negative effect on this SA objective as it would increase the amount of waste requiring final disposal. Design Principles include some measures that could address some of these negative impacts (scored +/++), although additional measures could also be integrated (for which the relevant Design Principle(s) has been scored -/--).</p> <p>Whilst the 'Parking, Service Access and Services' section recommends the use of recycled materials for parking areas, there are other Design Principles which could also include similar measures. The 'Building Materials' and 'Landscape within Plots' sections could also specify that consideration should be given to the use of recycled materials for buildings and landscaping within NRP.</p> <p>No references are made in the Design Principles to the provision of recycling facilities at NRP. This could be appropriately referred to in the 'Parking, Service Access and Services' section. Any references to these facilities should seek to encourage recycling at NRP, e.g. by ensuring that recycling points are in a prominent location and equally accessible as residual waste facilities.</p> <p>Recommendations</p> <ul style="list-style-type: none"> The 'Building Materials' and 'Landscape within Plots' sections could consider the use of recycled materials for buildings and landscaping at NRP. The provision of recycling facilities at NRP should be appropriately referred in the 'Parking, Service Access and Services' section. Require the use of Site Waste Management Plans, which

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													provide a structure for systematic waste management at all stages of a project's delivery. These plans are due to become a legal requirement for all construction projects over £200,000 in late 2007.
Social													
S1	<p>To provide everybody with the opportunity to live in a decent, suitable and affordable home.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce homelessness? • increase the range and affordability and quality of housing stock for all social groups? 	0	0	0	0	0	0	0	0	0	0	0	The Design Principles are not expected to affect the provision of decent, suitable or affordable housing.
S2	<p>To reduce poverty, inequality and social exclusion.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce poverty and social exclusion in those areas most?) 	0	0	0	+	0	0	0	0	0	0	0	<p>The broad and detailed options appraisals assumed that development at NRP would increase employment provision, improve education and skills of the working population and, improve access to local services and facilities. This would consequently reduce poverty, inequality and social exclusion.</p> <p>The Design Principles themselves have little influence on reducing poverty, inequality and social exclusion, with the exception of 'Building Layout'. This section seeks to orientate and place buildings in a manner that encourages various occupiers to meet within buildings or a 'common area' to a cluster of buildings. This is likely to encourage the</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													integration and mixing of employees from different research and development entities which is likely to reduce social exclusion within the working population of NRP.
S3	<p>To offer opportunities for all sections of the population to have rewarding and satisfying employment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce unemployment overall? • improve earnings? 	0	0	++	++	++	0	0	+	+	0	+	<p>The broad and detailed options appraisals concluded that development at NRP would have a significant positive effect on employment provision in the area as it is expected to deliver job opportunities in the research and development sector. Many of the Design Principles include measures that will contribute to these positive effects (scored +/++).</p> <p>The 'Building Performance', 'Building Layout' and 'Size and Massing of Buildings' sections promote flexibility in building design. This is likely to provide working accommodation for a range of future users/occupiers to support long-term employment. For example, 'Building Layout' considers the need to extend or link buildings in the future should an occupier wish to expand and remain at NRP.</p> <p>In addition, the 'Landscape within Plots', 'Parking, Service Access and Services' and 'Lighting and Security' sections promote a well designed landscape and positive and safe walking environment between car parks and buildings. This is likely to encourage take-up at NRP, positively contributing to the provision of satisfying employment in the area.</p>
S4	To improve accessibility to essential services, facilities and the workplace, particularly for those most in need.	0	0	0	+	0	0	0	0	0	0	0	<p>The broad and detailed options appraisals assumed that development at NRP would result in the provision of additional services and facilities at NRP. This would improve accessibility to local services for residents living close to NRP and for employees working at NRP and the university. Whilst the Design Principles do not specify the quantum of</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
(E.g. Will the option... • improve accessibility to key local services?)													<p>services and facilities that would be incorporated at NRP, Part 5 of the Development Brief (Use Class Variations) indicates additional uses that would be acceptable at NRP where they are ancillary to the main research and development uses at the site. These include for example, Use Class D1, which includes health centres, day nurseries and day centres.</p> <p>The Design Principles themselves have little influence on this SA objective, with the exception of the 'Building Layout' section. This section seeks to orientate and place buildings in a manner that encourages various occupiers to meet within buildings or a 'common area' to a cluster of buildings. This is likely to result in the sharing of services and facilities between buildings, improving their accessibility to those working at NRP.</p> <p>Recommendations</p> <ul style="list-style-type: none"> Reference should be made in the Design Principles to ensuring that services and facilities are located in an appropriately central location accessible to all (perhaps within the 'Parking, Service Access and Services' section).
S5	To improve the education and skills of the population overall. (E.g. Will the option... • improve qualifications and skills of young people?)	0	0	0	0	0	0	0	0	0	0	0	<p>The broad and detailed options appraisal assumed that development at NRP would improve the education and skills of the working population in South Norfolk owing to the nature of employment that would be located at NRP. The Design Principles themselves are not likely to significantly affect this conclusion.</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria Will the option...?		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
S6	<p>To improve the health of the population overall.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce death rates? • improve access to high quality health facilities? • encourage healthy lifestyles? 	+/?	0	+	+	+	0	0	++	-	+	0	<p>The broad and detailed options appraisal identified positive effects associated with development at NRP and the health of the population overall. Many of the Design Principles include measures that will further contribute to these positive effects (scored +/++) and other Principles that will reduce the potential positive effects (scored -/--).</p> <p>Maximising positive impacts</p> <p>The 'Landscapes within Plots' section encourages the creation of high quality open spaces between buildings. This is likely to contribute to the quality of life and health of those who work at NRP. In addition to minimising and attenuating surface run-off, sustainable drainage systems can also result in landscape benefits which can improve the variety of open spaces at NRP (as set out in 'Sustainable Drainage'). The position of buildings actively seeks to encourage the use of open spaces. For example, 'Building Layout' seeks to orientate or place buildings in a manner that encourages various occupiers to interact within or in the open spaces created between the buildings.</p> <p>In addition, the Design Principles include measures that will contribute to a healthy working environment. For example, the 'Building Performance' and 'Size and Massing of Buildings' sections seek to regulate the internal temperature of buildings through factors such as high levels of thermal fabric insulation, solar shading and maximising the benefits of natural daylight. In addition, the 'Breeam' Design Principles require buildings to achieve an 'Excellent' rating under Breeam, which has the potential to positively contribute to</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria Will the option...?		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
													<p>this SA objective. Breeam includes 'Health and Wellbeing' as one of the assessment issues and awards points for factors such as a quality indoor environment, occupant satisfaction, etc. However, it is possible for a building to receive an 'Excellent' Breeam rating without incorporating these measures. Therefore, there is no certainty that meeting the 'Breeam' Design Principles will significantly contribute to this SA objective.</p> <p>Potential negative impacts</p> <p>The only Design Principle that has the potential to negatively affect this SA objective is 'Parking, Service Access and Services'. This section includes a number of measures to improve the parking environment at NRP. This is likely to encourage employees to drive to NRP, and discourage them to walk or cycle which would represent a healthier lifestyle. However, this does need to be considered in the context of the circulation plan (Figure 3.2) which includes a pedestrian and cycle network linked to existing routes.</p> <p>Recommendations</p> <ul style="list-style-type: none"> The 'Parking, Service Access and Services' section should encourage the use of sustainable modes of transport by providing secure parking for bicycles. This section should also refer to the development of pedestrian and cycle networks in NRP linked to existing routes (as set out in the circulation plan of the Development Brief).
S7	To encourage local community identity and foster mixed	0	0	0	+/-	0	+	+	+	0	0	0	The broad and detailed options appraisals identified positive effects associated with development at NRP and local community identity. The Development Brief includes a

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
<p>communities with co-operative attitudes, helping to reduce anti-social activity.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • <i>reduce actual levels of crime/fear of crime?</i> • <i>encourage engagement in community activities?</i> 												<p>number of Design Principles that will further contribute to these positive effects (scored +/++). There are additional measures that could be taken to further contribute to this SA objective (for which the relevant Design Principle(s) has been scored -/--).</p> <p>Maximising positive impacts</p> <p>The Development Brief includes the following Design Principles that will contribute to this SA objective:</p> <ul style="list-style-type: none"> • The 'Building Layout' section seeks to orientate buildings in a manner which encourages various occupiers to interact in open spaces. This is likely to encourage the use of open spaces, increasing the safety of users and reducing crime. • 'Building Materials' and 'Landscape within Plots' encourage the use of local materials which is likely to strengthen local community identity and support acceptance of NRP into the local community. • The 'Landmark Elements' section encourages a focus at NRP which might include some distinguishing architectural features. It also suggests that this focus could act as a symbol for the Park as a whole. This is likely to encourage an identity for NRP. <p>Additional measures</p> <p>The 'Building Layout' section should ensure that buildings are placed and orientated so that they design out crime and anti-social behaviour, e.g. overlooking communal areas/open spaces.</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													Recommendations <ul style="list-style-type: none"> The 'Building Layout' section should ensure that buildings are placed and orientated so they design out crime and anti-social behaviour, e.g. overlooking communal areas/ open spaces.
S8	<p>To improve the quality of where people live.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> improve satisfaction of people with their neighbourhoods? increase access to and provision of quality open space? 	0	0	0	0	0	?	+	+	0	+	+	<p>The broad and detailed options appraisals identify positive effects associated with development at NRP and improving the quality of where people live. The Design Principles include a number of measures which seek to maximise these positive effects, including:</p> <ul style="list-style-type: none"> The development of a landscape plan for each component of NRP is likely to increase the provision and quality of open spaces in the area. Similarly, the 'Sustainable Drainage' section seeks to integrate sustainable drainage systems which are likely to result in high quality, multi-functional outdoor open spaces. 'Building Materials' notes that a variety of aesthetic solutions are applicable to the scale of buildings anticipated at NRP. Providing that good architectural design is followed, this has the potential to improve the built quality of the local area. The provision of 'Landmark Elements' at NRP is likely to contribute to the distinctiveness and built quality of the local area. The 'Lighting and Security' section requires any access control to use naturalised features such as waterbodies, hedges or woodlands. This is expected to be more 'acceptable' than high security fences. However, this section does not refer to measures that could help to

SA objective Question/decision-making criteria Will the option...?		Design Principles											Commentary
		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
													increase access to quality open spaces. Recommendations <ul style="list-style-type: none">Ensure that 'Lighting and Security' allows for appropriate access to quality open spaces.
Economic													
EC I	To encourage sustained economic growth. (E.g. Will the option... <ul style="list-style-type: none">support emerging employment uses in the District (e.g. Research, tourism)?help retain existing businesses?aid farming diversification?	0	0	++	++	++	++	+	+	+	0	0	The broad and detailed options appraisals identified positive effects associated with NRP and encouraging sustained economic growth as it is expected to support emerging research employment uses in the District. The Design Principles within the Development Brief have the potential to maximise some of the positive impacts identified in these appraisals (scored +/++). These include: <ul style="list-style-type: none">The sections on 'Building Performance', 'Building Layout' and 'Size and Massing of Buildings' encourage flexibility in the internal layout, subdivision and environmental control of buildings. This flexibility is likely to support a range of different users/occupiers and help to retain occupiers as they grow and wish to expand their operations.'Building Materials' encourages the appropriate design for buildings so that they attract potential tenants. Ensuring that NRP is fully occupied encourages sustained economic growth in the area.The 'Building Materials' and 'Landscape within Plots' promote the use of local materials in the buildings and landscapes associated with NRP. This is likely to support the local economy.

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<ul style="list-style-type: none"> • 'Landscape within plots' and 'Landmark Elements' have the potential to contribute to economic growth by providing a distinctive and healthy environment within which to work. • Parking areas that are part of a clear circulation system will encourage take-up of plots at NRP for those dependant on/wishing to use the private car.
EC2	<p>To encourage and accommodate both indigenous and inward investment promoting a positive image of the District.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • provide for a variety of locations for businesses? • add to a ready supply of employment premises? 	0	0	++	++	++	+	+	+	0	+	0	<p>The detailed options appraisal identified positive effects associated with development at NRP and encouraging indigenous and inward investment. It was concluded that the level to which NRP will encourage this investment and promote a positive image of the District is likely to depend on, among other things, the quality of the buildings and setting of the research park. The Design Principles include a number of measures that will contribute to these factors. For example:</p> <ul style="list-style-type: none"> • As set out against SA objective ENV6, 'Landscape within Plots' and 'Sustainable Drainage' is likely to provide high quality, multi-functional open spaces. This is likely to provide a positive and healthy working environment, encouraging indigenous and inward investment in the area. • As set out against SA objective EC1, 'Building Performance', 'Building Layout' and 'Size and Massing of Buildings' encourage flexibility in the internal layout, subdivision and environmental control of buildings. This flexibility is likely to support a range of different users/occupiers, encouraging both indigenous and inward investment.

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<ul style="list-style-type: none"> 'Landmark Elements' and 'Building Materials' have the potential to contribute to a distinctive and healthy environment within which to work. This is also likely to encourage both indigenous and inward investment.
EC3	<p>To encourage efficient patterns of movement in support of economic growth.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> encourage the development of local employment locations? minimise the journey to work? enhance a group of existing employment generating uses? encourage mixed use or live / work? 	0	0	+	+	+	+	+	+	+/--	0	0	<p>The broad and detailed options appraisals identified both positive and negative effects of NRP on encouraging efficient patterns of movement. Whilst it would enhance a group of existing employment generating uses, it is likely to increase car traffic to the site. The Design Principles have the potential to maximise some of the positive impacts (scored +/++) and worsen some of the negative impacts (scored -/--) identified in these appraisals.</p> <p>Maximising positive impacts</p> <p>As discussed under SA objective EC1, many of the Design Principles (namely 'Building Performance', 'Building Layout', 'Size and Massing of Buildings', 'Building Materials', 'Landmark Elements', 'Landscape within Plots' and 'Parking, Service Access and Services') will encourage economic growth at NRP. This is likely to therefore enhance a group of existing employment generating uses, positively contributing to this SA objective.</p> <p>Negative impacts</p> <p>The 'Parking, Service Access and Services' section seeks to improve the parking environment at NRP which could encourage employees to use their cars to access NRP rather than more sustainable forms of transport. This is likely to discourage more sustainable patterns of movement in support of economic growth. However, this does need to</p>

SA objective		Design Principles											Commentary
Question/decision-making criteria		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
Will the option...?													
													<p>be considered in the context of the circulation plan (Figure 3.2) which includes a pedestrian and cycle network linked to existing routes and Figure 1.5 which sets out public transport improvements required as part of NRP.</p> <p>Recommendations</p> <ul style="list-style-type: none"> The 'Parking, Service Access and Services' section should encourage the use of sustainable modes of transport by providing secure parking for bicycles. This section should also refer to the development of pedestrian and cycle networks in NRP linked to existing routes (as set out in the circulation plan of the Development Brief).
EC4	<p>To improve the social and environmental performance of the economy.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> offer the opportunity for more flexible working? operate in a way which seeks to minimise impact on the environment? 	+/?	++	+	0	+	+	0	0	-	0	0	<p>The Design Principles include measures that will contribute to the social and environmental performance of the economy. They include:</p> <ul style="list-style-type: none"> The 'Breeam' Design Principles require buildings to achieve an 'Excellent' rating under Breeam, which has the potential to positively contribute to this SA objective. Breeam includes a number of assessment criteria which would contribute to the social and environmental performance of the local economy (e.g. operating in a way which will minimise the impact on the environment). However, it is possible for a building to receive an 'Excellent' Breeam rating without scoring well on all of these criteria. Therefore, there is uncertainty that the 'Breeam' Design Principles will significantly contribute to this SA objective. The 'Climate Change', 'Building Performance' and 'Size and Massing of Buildings' sections of the Development

SA objective Question/decision-making criteria Will the option...?		Design Principles											Commentary
		BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
													<p>Brief seek to minimise emissions of greenhouse gases, promote energy efficiency and minimise water consumption. This is likely to improve the environmental performance of the local economy.</p> <p>The only Design Principle that could conflict with this SA objective is 'Parking, Service Access and Services'. Improving the parking environment at NRP could encourage employees to use their cars to access NRP rather than more sustainable forms of transport. This would increase the impact of NRP on the environment. However, this does need to be considered in the context of the circulation plan (Figure 3.2) which includes a pedestrian and cycle network linked to existing routes.</p> <p>Recommendations</p> <ul style="list-style-type: none">The 'Parking, Service Access and Services' section should encourage the use of sustainable modes of transport by providing secure parking for bicycles. This section should also refer to the development of pedestrian and cycle networks in NRP linked to existing routes (as set out in the circulation plan of the Development Brief) and to the provision of public transport improvements (as set out in Figure 1.5 of the Development Brief).
EC5	<p>To improve the economic performance in rural areas.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">encourage rural	0	0	0	0	0	+/?	0	+/?	0	0	0	<p>Given that NRP is located on the urban fringe of Norwich City, the broad and detailed options appraisal concluded that it is not expected to affect the economic performance of rural areas in South Norfolk. However, the 'Building Materials' and 'Landscape within Plots' sections of the Development Brief both encourage the use of locally</p>

SA objective Question/decision-making criteria Will the option...?	Design Principles											Commentary
	BREEAM	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape within Plots	Parking, Service Access/services	Sustainable drainage	Lighting/security	
<div>diversification?</div> <ul style="list-style-type: none"> offer sources of employment in rural areas? improve electronic communication potential? 												<p>sourced materials for the buildings and landscaping associated with NRP. This has the potential to support rural economies. However, there is uncertainty associated with this as the nature and location of local materials that could be used is unknown.</p>

Appendix I3
Appraisal of the NRP Development Brief SPD
Colney Hall specific Design Principles

Appraisal of NRP Development Brief SPD Colney Hall specific Design Principles

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
Environment								
ENVI	<p>To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none">• protect sites of nature conservation value from inappropriate development?• increase the number or diversity of sites of nature conservation interest?• bring negative effects to designated sites and what would this involve?• adversely affect sites of geological interest?• contribute to achieving BAP targets?)	++	+	+	+	0	+	<p>The detailed options appraisal for Colney Hall concluded that development could have both positive and negative impacts on local biodiversity. The specific Design Principles for Colney Hall have the potential to maximise many of the positive impacts and mitigate some of the negative impacts (scored +/++).</p> <p>Maximising positive impacts</p> <p>The introductory section requires the development of a Management Plan for the whole site, in which woodland management will be an important component. For example, it states that plantations should be gradually replanted with native broad leaves and woodland managed for nature conservation. This is likely to improve existing habitats, significantly contributing to this SA objective.</p> <p>Mitigating negative impacts</p> <p>The introductory section requires ecological studies to be carried out to inform development proposals and requires full ecological survey data to be provided with applications. It also recognises potential construction impacts associated with development and sets out mitigation measures. These measures are likely to minimise the impact on biodiversity at Colney Hall and on the River Yare and County Wildlife Sites.</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
								<p>The section on the Rose Garden requires the existing hedge, tree belt and mature historic trees to be retained. Similarly, the section on the Pump House area requires the important group of trees adjacent to the drive to be retained. The Hall Extension section requires development to be sympathetic to potential protected species and impacts on specimen historic trees. It also requires potential impacts on bat roosts to be fully considered and mitigated in line with Natural England requirements. The section on the Plantation recognises its low ecological value, but still requires detailed tree surveys to be carried out so that significant trees can be identified and layouts formulated which ensure their retention where appropriate.</p> <p>These measures are likely to mitigate potential negative impacts on biodiversity on-site, at the River Yare and at nearby County Wildlife Sites.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The sections on the Walled Garden and Plantation could include requirements to improve the quality of their habitats. • The introductory section could seek to ensure that habitats in different sections of Colney Hall are linked through the use of green corridors, open spaces, etc.
ENV2	To reduce vulnerability to climate change, including minimising the risks from flooding.	0	-	-	-	-	-	<p>Whilst the detailed options appraisal for Colney Hall concluded that development could have negative impacts on this SA objective, the generic Design Principles include a number of measures that will mitigate some of these impacts. For example, whilst development will increase the</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
<p>(E.g. Will the option...</p> <ul style="list-style-type: none"> adversely affect sites of geological interest? contribute to achieving BAP targets? 								<p>impacts. For example, whilst development will increase the area of impermeable surfaces at Colney Hall (increasing the risk of flooding events), sustainable drainage systems are encouraged on site which will help to mitigate this effect.</p> <p>However, there are additional measures that could be taken to further climate-proof development at Colney Hall (for which the relevant Design Principle(s) has been scored -/--). Colney Hall borders the River Yare. Whilst it does not lie within flood risk zone 2 (low to medium risk with an annual probability of flooding from rivers of less than 0.1%) or zone 3 (high risk with an annual probability of flooding of 1.0% or greater from rivers), these zones do border the site. This section could include reference to climate proofing development given the potential increases in flood risk in light of climate change</p> <p>Recommendations</p> <ul style="list-style-type: none"> Ensure that development at Colney Hall is appropriately climate-proofed taking into account potential increases in flood risk from the River Yare.
ENV3	<p>To maximise the use of renewable energy solutions and reduce contributions to climate change.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> contribute to achieving BAP targets? 	0	0	0	0	0	0	<p>The detailed options appraisal for Colney Hall concluded that development has the potential to use renewable energy solutions given national and regional planning policy. This is further encouraged through the generic Design Principles which promote a number of actions that seek to increase the use of renewable energy solutions and reduce contributions to climate change. These Design Principles will be carried forward in development at Colney Hall. However, the specific Design Principles for Colney Hall are</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	<p><i>BAP targets?</i></p> <ul style="list-style-type: none"> • encourage efficient use of energy? • promote a sequential approach to the pattern of development? • reduce the emissions of greenhouse gases, including from traffic? 							not likely to influence this SA objective.
ENV4	<p>To reduce the effect of traffic on the environment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce traffic volumes? • reduce traffic congestion? • reduce the effect of HGV traffic on people and the environment? • increase the % of journeys using non-car modes? 	0	--	--	--	--	--	<p>The detailed options appraisal for Colney Hall concluded that development would have a negative effect on this SA objective as it would increase traffic generation to access employment facilities on site. The appraisal for the generic Design Principles identified measures that would mitigate some of these effects and others that would further contribute to these negative impacts.</p> <p>The specific Design Principles for Colney Hall refer to carefully planned vehicle access routes to each of the five potential development hubs. Having parking facilities close to employment locations is likely to encourage employees to drive to NRP, negatively affecting this SA objective. However, this needs to be considered in the context of the circulation plan (Figure 3.2) which includes a cyclepath/ major pedestrian link between Colney Hall, the rest of NRP and further afield.</p> <p>Recommendation</p> <ul style="list-style-type: none"> ○ Ensure that the use of sustainable modes of transport

SA Objective		Specific design principles for Colney Hall					Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	
							are encouraged by providing secure parking for bicycles. This should be referred to in the 'Parking, Service Access and Services' section in the generic design principles. Public transport improvements (as set out in Figure 1.5 of the Development Brief) should also be referred to in the 'Parking, Service Access and Services' section.
ENV5	<p>To improve air quality and minimise noise, vibration and light pollution.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • <i>reduce emissions of atmospheric pollution?</i> • <i>improve the ambience of local areas?</i> 	+	-	-	-	-	<p>The detailed options appraisal for Colney Hall concluded that development could have a negative effect on this SA objective as any development is likely to increase noise, vibration and light pollution during the construction and operation phases. The specific Design Principles for Colney Hall include measures that will mitigate some of these impacts (scored +/++) and others that will further contribute to the negative effects (scored -/--).</p> <p>Mitigating negative impacts</p> <p>The introductory section requires design proposals to include adequate and workable protection measures, control mechanisms and monitoring for all aspects of construction. This is likely to minimise potential impacts on air quality, noise, vibration and light pollution during the construction period.</p> <p>Contributing to negative impacts</p> <p>As commented under SA objective ENV4, the specific Design Principles for Colney Hall refer to carefully planned vehicle access routes to each of the five potential development hubs. Having parking facilities close to the employment locations is likely to encourage employees to</p>

SA Objective	Specific design principles for Colney Hall						Commentary
	Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
							<p>drive to NRP, which could negatively affect air quality. However, this needs to be considered in the context of the circulation plan (Figure 3.2) which includes a cyclepath/ major pedestrian link between Colney Hall, the rest of NRP and further afield.</p> <p>Recommendation</p> <ul style="list-style-type: none"> ○ Ensure that the use of sustainable modes of transport are encouraged by providing secure parking for bicycles. This should be referred to in the 'Parking, Service Access and Services' section in the generic design principles. Public transport improvements (as set out in Figure 1.5 of the Development Brief) should also be referred to in the 'Parking, Service Access and Services' section.
<p>ENV6 To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • protect vulnerable and valued landscapes, or mitigate the effects of inappropriate development? • ensure that design is complementary to, or 	+	+	+	+/-	+	0	<p>The detailed options appraisal for Colney Hall concluded that development could have positive and negative impacts on the local landscape/townscape. The Design Principles specific to Colney Hall have the potential to maximise many of the positive effects identified in the appraisal and mitigate some of the negative impacts (scored +/++).</p> <p>Maximising positive impacts</p> <p>The Hall Extension section requires due consideration to be given to any opportunities to undertake works to improve the Hall's external appearance, particularly with regard to previous unsympathetic additions/loss of balance on the principal elevation. This is likely to improve the quality of Colney Hall's historic environment.</p>

SA Objective	Specific design principles for Colney Hall						Commentary
	Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
<p><i>able to enhance, the character of local landscapes?</i></p> <ul style="list-style-type: none"> • <i>reduce the amount of derelict, degraded and under-used land?</i> • <i>preserve or enhance the District's heritage?</i> 							<p>Mitigating negative impacts</p> <p>The Introductory section requires development to be informed by baseline studies, including a landscape study. Using this information to prepare planning applications is likely to result in schemes sensitive to the landscape context which is likely to help mitigate some of the negative impacts identified in the detailed options appraisal.</p> <p>The section on the Hall Extension requires extensions to be, among other things, fully sympathetic to its listed status, setting and designated views. It also sets out an approach to minimise negative impacts of ancillary uses on the historic and landscape setting. For example, it seeks careful design and layout of access and parking to retain the landscape experience of the Drive. These measures are all likely to minimise the potential negative impacts on the historic environment.</p> <p>The Walled Garden section sets out principles to minimise the effect of development on the Grade II listed Walled Garden. For example, it must be sensitive to the scale, layout and materials of the walls and the space that it encloses. The section on the Rose Garden seeks to retain the existing hedge and tree belt along the southern boundary to reduce the visual impact on view from the drive.</p> <p>Potential negative impacts</p> <p>The section on the Pump House area identifies visual intrusion as a sensitivity of this area. However, it does not</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
								<p>set out design principles that address this issue.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Include wording in the section on the Pump House area to address the sensitivity of the site to visual intrusion.
ENV7	<p>To minimise the loss of undeveloped land and conserve and improve the quality of soil resources.</p> <p><i>(E.g. Will the option...</i></p> <ul style="list-style-type: none"> • <i>avoid the use of productive agricultural land?</i> • <i>minimise the irreversible use of soil resources?</i> 	0	0	0	0	0	0	<p>The detailed options appraisal for Colney Hall concluded that development would have negative impacts on this SA objective as it would involve development on currently undeveloped land. The specific Design Principles for Colney Hall are not likely to affect this conclusion.</p>
ENV8	<p>To improve water qualities and provide for sustainable sources of supply and sustainable use.</p> <p><i>(E.g. Will the option...</i></p> <ul style="list-style-type: none"> • <i>incorporate Sustainable Urban Drainage Systems?</i> • <i>reduce water</i> 	0	0	0	0	0	+	<p>The detailed options appraisal for Colney Hall identified potential negative impacts of development on water quality, especially on the River Yare and nearby County Wildlife Sites. Many of these impacts are addressed by the generic Design Principles, for example, the 'Sustainable Drainage' section which requires developers to incorporate sustainable drainage systems at NRP, helping to regulate water quality.</p> <p>The potential development hub that is closest to the River Yare and nearby County Wildlife Sites is the Plantation. The specific Design Principles for Colney Hall require that</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	<i>consumption?</i> <ul style="list-style-type: none"> ensure that the supply of water be efficient in terms of the overall network? 							developments in this area should factor in treatment of surface water run-off given the large volumes anticipated and the absence of existing drain infrastructure. This is likely to minimise the risk of water contamination from development at Colney Hall.
ENV9	To minimise the production of waste and increase recycling. <i>(E.g. Will the option...</i> <ul style="list-style-type: none"> result in less waste being produced or requiring disposal? facilitate better community recycling facilities? 	0	0	0	0	0	0	The detailed options appraisal for Colney Hall concluded that development at NRP would have a negative effect on this SA objective as it would increase the amount of waste requiring final disposal. No references are made in the generic or Colney Hall specific Design Principles that require the provision of recycling facilities at NRP. It is recommended that these are referred to under the generic principles section. Recommendations The provision of recycling facilities at NRP should be appropriately referred to in the generic Design Principles section.
Social								
SI	To provide everybody with the opportunity to live in a decent, suitable and affordable home. <i>(E.g. Will the option...</i> <ul style="list-style-type: none"> reduce homelessness? increase the range and 	0	0	0	0	0	0	The specific Design Principles for Colney Hall are not expected to affect the provision of decent, suitable or affordable housing.

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
<i>affordability and quality of housing stock for all social groups?</i>								
S2	To reduce poverty, inequality and social exclusion. (E.g. Will the option... <ul style="list-style-type: none">• <i>reduce poverty and social exclusion in those areas most?</i>)	0	0	0	0	0	0	The detailed options appraisal for Colney Hall assumed that development at NRP would increase employment provision, improve education and skills of the working population and, improve access to local services and facilities. This is expected to reduce poverty, inequality and social exclusion. The specific Design Principles for Colney Hall have little influence on these factors.
S3	To offer opportunities for all sections of the population to have rewarding and satisfying employment. (E.g. Will the option... <ul style="list-style-type: none">• <i>reduce unemployment overall?</i>• <i>improve earnings?</i>	+	+	+	+	+	+	The detailed options appraisal for Colney Hall concluded that development at NRP would have a significant positive effect on employment provision in the area as it is expected to deliver job opportunities in the research and development sector. The specific Design Principles for Colney Hall focus on the protection and enhancement of landscape and environmental features. This is likely to provide a positive and healthy working environment, encouraging investment at NRP and full occupation of the research park. This is likely to positively contribute to this SA objective.
S4	To improve accessibility to essential services, facilities and the workplace, particularly for those most in need.	0	0	0	0	0	0	The detailed options appraisal for Colney Hall identified positive effects associated with development and improving accessibility to local services for employees working at Colney Hall. The specific Design Principles for Colney Hall are expected to have little influence on these positive effects.

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	(E.g. Will the option... <ul style="list-style-type: none">improve accessibility to key local services?							
S5	To improve the education and skills of the population overall. (E.g. Will the option... <ul style="list-style-type: none">improve qualifications and skills of young people?	0	0	0	0	0	0	The detailed options appraisal for Colney Hall assumed that development at NRP would improve the education and skills of the working population owing to the nature of employment that would be located at NRP. However, the specific Design Principles for Colney Hall are not expected to significantly affect this positive effect.
S6	To improve the health of the population overall. (E.g. Will the option... <ul style="list-style-type: none">reduce death rates?improve access to high quality health facilities?encourage healthy lifestyles?	+	+/-	+/-	+/-	+/-	+/-	The specific Design Principles for Colney Hall focus on the protection and enhancement of landscape and environmental features. This is likely to provide a positive and healthy working environment, contributing to this SA objective. However, there is potential that increased car use to access employment locations (as set out in response to SA objective ENV4) could increase traffic volumes and contribute to the risk of road accidents elsewhere. This could negatively affect this SA objective.
S7	To encouraging local community identity and foster mixed communities with co-operative attitudes, helping to reduce anti-	+	+	0	0	0	0	The detailed options appraisal for Colney Hall identified positive effects associated with development and local community identity. The specific Design Principles for Colney Hall focus on the protection and enhancement of landscape and environmental features. Improving the historic environment and visual appearance of the area is

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	<p>social activity.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • reduce actual levels of crime/fear of crime? • encourage engagement in community activities? 							likely to strengthen local community identity and support acceptance of NRP into the local community. The Design Principles for the development hub with greatest 'exposure' (i.e. the Hall Extension) is likely to have the most positive effect on local community identity.
S8	<p>To improve the quality of where people live.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • improve satisfaction of people with their neighbourhoods? • increase access to and provision of quality open space? 	+	+	+	+	+	+	The detailed options appraisal for Colney Hall identified positive effects associated with development and improving the quality of where people live. The specific Design Principles for Colney Hall focus on the protection and enhancement of landscape and environmental features. This is likely to improve the visual appearance of the area, which could improve the satisfaction of people with their neighbourhoods.
Economic								
EC1	<p>To encourage sustained economic growth.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • support emerging employment uses in the District (e.g. Research, tourism)? 	+	+	+	+	+	+	<p>The detailed options appraisal for Colney Hall identified positive effects associated with development of Colney Hall and encouraging sustained economic growth as it would be expected to support emerging research employment uses in the District.</p> <p>The specific Design Principles for Colney Hall have the potential to contribute to economic growth. They focus on protecting and enhancing the local landscape and</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	<ul style="list-style-type: none"> • <i>help retain existing businesses?</i> • <i>aid farming diversification?</i> 							environmental features which is likely to provide a positive and healthy working environment. This is likely to encourage investment at NRP and full occupation of the research park, positively contributing to this SA objective.
EC2	<p>To encourage and accommodate both indigenous and inward investment promoting a positive image of the District.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • <i>provide for a variety of locations for businesses?</i> • <i>add to a ready supply of employment premises?</i> 	+	+	+	+	+	+	The detailed options appraisal for Colney Hall identified positive effects associated with development at Colney Hall and encouraging indigenous and inward investment. As set out in response to SA objective EC1, the specific design principles for Colney Hall focus on protecting and enhancing the local landscape and environmental features. This is likely to promote a positive image of the area for employment uses which is likely to encourage inward investment in the area.
EC3	<p>To encourage efficient patterns of movement in support of economic growth.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> • <i>encourage the development of local employment locations?</i> • <i>minimise the journey to</i> 	0	--	--	--	--	--	<p>The detailed options appraisal for Colney Hall identified both positive and negative effects of development on encouraging efficient patterns of movement. Whilst it would enhance a group of existing employment generating uses, it is likely to increase car traffic to the site.</p> <p>As set out against SA objective ENV4, the Design Principles specific to Colney Hall refer to carefully planned vehicle access routes to each of the five potential development hubs. Having parking facilities close to employment locations is likely to encourage employees to drive to NRP,</p>

SA Objective		Specific design principles for Colney Hall						Commentary
		Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
	<p>work?</p> <ul style="list-style-type: none"> enhance a group of existing employment generating uses? encourage mixed use or live / work? 							<p>negatively affecting this SA objective. However, this needs to be considered in the context of the circulation plan (Figure 3.2) which includes a cyclepath/major pedestrian link between Colney Hall, the rest of NRP and further afield.</p> <p>Recommendation</p> <ul style="list-style-type: none"> Ensure that the use of sustainable modes of transport are encouraged by providing secure parking for bicycles. This should be referred to in the 'Parking, Service Access and Services' section in the generic design principles.
EC4	<p>To improve the social and environmental performance of the economy.</p> <p>(E.g. Will the option...</p> <ul style="list-style-type: none"> offer the opportunity for more flexible working? operate in a way which seeks to minimise impact on the environment? 	0	-	-	-	-	-	<p>The appraisal of the generic Design Principles identified many measures that will contribute to the social and environmental performance of the economy. The Colney Hall specific Design Principles focus on the protection and enhancement of landscape and environmental features, and so are not likely to significantly affect this SA objective. However, as set out against SA objective ENV4, the Colney Hall Design Principles refer to carefully planned vehicle access routes to each of the five potential development hubs. This is likely to encourage employees to drive to NRP which could conflict with this SA objective.</p>
EC5	<p>To improve the economic performance in rural areas.</p> <p>(E.g. Will the option...</p>	0	0	0	0	0	0	<p>Given that Colney Hall is located on the urban fringe of Norwich City, the detailed options appraisal for Colney Hall concluded that it is not expected to affect the economic performance of rural areas in South Norfolk. Similarly, the specific Design Principles for Colney Hall are not expected</p>

SA Objective	Specific design principles for Colney Hall						Commentary
	Introduction	Hall Extension	Rose Garden	Pump House area	Walled garden	Plantation	
<ul style="list-style-type: none"> • encourage rural diversification? • offer sources of employment in rural areas? • improve electronic communication potential? 							to influence this SA objective.

Appendix I4

Appraisal of the cumulative and synergistic effects of the NRP Development Brief SPD

The interaction between the preferred broad and detailed options and the generic and Colney Hall specific Design Principles against each of the SA objectives

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Bream	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/ security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
Environment																					
ENVI To maintain and enhance biodiversity, geodiversity, species and habitat quality, and avoid habitat fragmentation.	--/+?	+/-/?	+/-	+/?	0	0	-	0	0	0	-	0	++	+	++	+	+	+	0	+	The principle and quantum of Development at NRP could have potentially significant negative effects on biodiversity, especially on the River Yare and nearby County Wildlife Sites. However, the generic and Colney Hall specific Design Principles include a number of measures that will mitigate these negative impacts and other measures that will enhance biodiversity in the area. The elements of the Development Brief are therefore expected to combine to create an overall positive cumulative effect on biodiversity in the area.
ENV2 To reduce vulnerability to climate change, including minimising the risks from	-	-/?	-/?	0	++	0	+	++	0	0	++	-	+	0	0	-	-	-	-	-	Development at NRP could result in potential negative effects on vulnerability to climate change. However, the Design Principles include a

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breeam	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
flooding.																					number of measures that will mitigate these negative effects and other measures that will ensure that development at NRP is appropriately adapted to climate change. The elements of the SPD are therefore expected to combine to create an overall neutral cumulative effect on the vulnerability of development to climate change.
ENV3 To maximise the use of renewable energy solutions and reduce contributions to climate change.	-/?	++	+/?	+/?	++	+	0	+	+/?	0	-	--	0	+	0	0	0	0	0	0	Development at NRP is likely to have significant positive effects on maximising the use of renewable energy solutions and reducing contributions to climate change. The generic Design Principles include a number of measures to maximise some of these positive impacts. The elements of the SPD are therefore expected to combine to create an overall significant positive effect on the use of renewable energy solutions.
ENV4 To reduce	--/+/?	-/?	-/?	+/?	+/?	0	0	0	+	0	0	--	0	0	0	--	--	--	--	--	The principle and quantum of

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Bream	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/ security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
the effect of traffic on the environment.																				development at NRP could have significant negative effects on the environment through an increase in traffic generation. The generic Design Principles include a number of measures that will help to mitigate these effects, but the generic and Colney Hall specific Design Principles include measures that are likely to have further negative influences on the effect of traffic on the environment. The elements of the SPD are therefore expected to combine to create an overall significant negative effect on this SA objective.	
ENV5 To improve air quality and minimise noise, vibration and light pollution.	-/?	-/?	-/?	+/?	0	0	0	0	-	0	0	-	0	+	+	-	-	-	-	-	The preferred quantum and expression of development at NRP could have negative effects on air quality, noise, vibration and light pollution. The Design Principles include some measures that will help to mitigate these effects, but others, especially in the Colney Hall specific Design Principles that will contribute to the

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Bream	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
																					negative effects. The elements of the SPD are therefore expected to combine to create an overall negative effect on air quality, noise, vibration and light pollution.
ENV6 To maintain and enhance the distinctiveness and quality of landscapes, townscapes and the historic environment.	-/?	-/+/?	+/-/?	+/?	0	0	0	0	+/-	+	++	+	+	+	+	+	+	+/-	+	0	The preferred quantum and expression of development at NRP is likely to result in both positive and negative effects on the quality of local landscapes, townscapes and the historic environment. However, the generic and Colney Hall specific Design Principles include a number of measures that will maximise the positive effects and minimise the negative effects. The elements of the SPD are therefore expected to combine to create an overall positive effect on the quality of local landscapes, townscapes and the historic environment.
ENV7 To minimise the loss of undeveloped land	--	--	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Development at NRP would occur on currently productive agricultural land, which would

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breeam	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
and conserve and improve the quality of soil resources.																					have a significant negative effect on this SA objective. The Design Principles are not likely to affect this conclusion. Therefore, the elements of the SPD are expected to combine to create a significant negative impact on the loss of undeveloped land.
ENV8 To improve water qualities and provide for sustainable sources of supply and sustainable use.	--/?	--/?	--	+/?	++	0	0	0	0	0	+/-	0	++	0	0	0	0	0	0	+	The preferred quantum and expression of development at NRP could have significant negative effects on water quality and consumption. The generic and Colney Hall specific Design Principles include a number of measures that will mitigate some of these effects. Therefore, the elements of the SPD are expected to combine to create an overall negative effect on water quality and consumption.
ENV9 To minimise the production of waste and increase recycling.	-/?	-/?	-/?	0	0	0	0	0	-	0	-	+/--	0	0	0	0	0	0	0	0	Development at NRP is likely to increase waste production, negatively affecting this SA objective. The Design Principles do not make direct

SA objective	Preferred broad option	Preferred detailed option		Design Principles										Design Principles for Colney Hall						Commentary	
		Main Site	Colney Hall	Breem	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/ security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden		Plantation
																					reference to the provision and encouragement of recycling at NRP. Therefore, the elements of the SPD are expected to combine to create negative effects on minimising the production of waste and increasing recycling.
Social																					
S1 To provide everybody with the opportunity to live in a decent, suitable and affordable home.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	The SPD is unlikely to cause any cumulative effects on the provision of decent, suitable and affordable housing.
S2 To reduce poverty, inequality and social exclusion.	+/?	+	+	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	Development at NRP is likely to result in positive impacts on reducing poverty, inequality and social exclusion. Whilst the Design Principles are not generally expected to affect this SA objective, the principle and expression of development at NRP are likely to combine to create positive cumulative effects on accessibility to services, facilities and the workplace.

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breem	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
S3 To offer opportunities for all sections of the population to have rewarding and satisfying employment.	++	++	++	0	0	++	++	++	0	0	+	+	0	+	+	+	+	+	+	+	Development at NRP is likely to have significant positive impacts on the provision of rewarding and satisfying employment. The generic and Colney Hall specific Design Principles are expected to maximise these positive effects. The elements of the SPD are therefore expected to combine to create significant positive cumulative effects on employment provision in the District.
S4 To improve accessibility to essential services, facilities and the workplace, particularly for those most in need.	++/?	+	+	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	Development at NRP is likely result in significant positive impacts on accessibility to services, facilities and the workplace. Whilst the Design Principles are not generally expected to affect this SA objective, the principle and expression of development at NRP are likely to combine to create significant positive cumulative effects on accessibility to services, facilities and the workplace.

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Bream	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
S5 To improve the education and skills of the population overall.	++	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Development of NRP is likely result in significant positive impacts on education and skills. Although the Design Principles are not expected to affect this SA objective, the principle and expression of development at NRP are likely to combine to create significant positive cumulative effects on education and skills.
S6 To improve the health of the population overall.	++	+	+	+/?	0	+	+	+	0	0	++	-	+	0	+	+/-	+/-	+/-	+/-	+/-	Development at NRP is likely to have significant positive effects on improving the health of the local population. The Design Principles include measures that are expected to maximise these positive effects and others that are expected to result in negative impacts on this SA objective. However, the elements of the SPD are expected to combine to create significant positive effects on the health of the local population.
S7 To encourage local community identity and foster	+	+	+	0	0	0	+/-	0	+	+	+	0	0	0	+	+	0	0	0	0	The preferred principle and quantum of development at NRP is likely to result in

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breeam	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
mixed communities with co-operative attitudes, helping to reduce anti-social activity.																					positive impacts on encouraging local community identity. The Design Principles include a number of measures that will maximise these positive effects. Therefore, the elements of the SPD are likely to combine to create positive effects on encouraging local community identity in the area.
S8 To improve the quality of where people live.	++	++	+	0	0	0	0	0	?	+	+	0	+	+	+	+	+	+	+	+	The combination of development at NRP and the generic and Colney Hall specific Design Principles that will guide this development are likely to create significant positive cumulative effects on the quality of the local area.
Economic																					
ECI To encourage sustained economic growth.	++	++	++/?	0	0	++	++	++	++	+	+	+	0	0		+	+	+	+	+	Development at NRP is likely to result in significant positive effects on encouraging economic growth. The generic and Colney Hall specific Design Principles are expected to maximise these positive effects. The elements of the SPD are therefore expected to combine

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breem	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
																					to create significant positive cumulative effects on encouraging economic growth.
EC2 To encourage and accommodate both indigenous and inward investment promoting a positive image of the District.	++	+	++/?	0	0	++	++	++	+	+	+	0	+	0	+	+	+	+	+	+	Development at NRP is likely to have significant positive impacts on encouraging and accommodating inward investment. The generic and Colney Hall specific Design Principles are expected to maximise these positive effects. The elements of the SPD are therefore expected to combine to create significant positive cumulative effects on accommodating indigenous and inward investment.
EC3 To encourage efficient patterns of movement in support of economic growth.	+/-/?	+/-/?	+/-/?	0	0	+	+	+	+	+	+	+/-	0	0	0	--	--	--	--	--	The preferred principle and expression of development at NRP is likely to have both positive and negative effects on encouraging efficient patterns of movement. The generic and Colney Hall specific Design Principles include measures that will maximise these positive effects and others that will further contribute to the

SA objective	Preferred broad option	Preferred detailed option		Design Principles											Design Principles for Colney Hall						Commentary
		Main Site	Colney Hall	Breeam	Climate change	Building performance	Building layout	Size/massing of buildings	Building materials	Landmark elements	Landscape	Parking, service access,	Sustainable drainage	Lighting/security	Introduction	Hall Extension	Rose Garden	Pump House	Walled Garden	Plantation	
																					negative impacts. The elements of the SPD are expected to combine to create negative cumulative effects on encouraging efficient patterns of movement.
EC4 To improve the social and environmental performance of the economy.	?	?	?	+/?	++	+	0	+	+	0	0	-	0	0	0	-	-	-	-	-	There is uncertainty associated with the effects of development at NRP on the social and environmental performance of the economy. There are measures outlined in the generic and Colney Hall specific Design Principles that will both contribute to and conflict with this SA objective. The elements of the SPD are expected to combine to create neutral effects on the social and environmental performance of the economy.
EC5 To improve the economic performance in rural areas.	0	0	0	0	0	0	0	0	+/?	0	+/?	0	0	0	0	0	0	0	0	0	The SPD is unlikely to cause any cumulative effects on economic performance in rural areas.