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Sustainability Appraisal of the Norwich Site Allocations and Specific Site Policies DPD

Regulation 19 (Pre-submission) Version

Prepared by LUC
June 2012

Project Title: Sustainability Appraisal of the Norwich Site Allocations and Site Specific Policies DPD

Client: Norwich City Council

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- Annex 2: Updated December 2010 SA report
- Annex 3: Updated July SA Addendum

Non-technical Summary

What is the purpose of Sustainability Appraisal?

- 1 When preparing the Site Allocations and Site Specific Policies Development Plan Document (DPD) (hereafter referred to as the "Site Allocations DPD" for simplicity), Norwich City Council is required by law to carry out a Sustainability Appraisal (SA) and a Strategic Environmental Assessment (SEA). The Government recommends that both SA and SEA are undertaken in one process to meet the legal requirements and this process is referred to as the "SA", with the overall aim of achieving sustainable development.
- 2 The purpose of the SA was to assist Norwich City Council in preparing the Site Allocations DPD by identifying the key sustainability issues facing the city, to predict what would be the likely effects of the Site Allocations DPD on these issues, and to put forward recommendations to improve it. The aim was to ensure that the proposed Site Allocations have as many positive effects as possible, and that any potential negative effects are avoided if housing and employment development is delivered on the allocated sites.

What is in the Site Allocations DPD?

- 3 In addition to the Joint Core Strategy that covers Norwich along with Broadland and South Norfolk, Norwich City Council is continuing the approach of setting out local planning policies in two separate development plan documents:
 - The Site Allocations DPD, which contains detailed, site specific policies and proposals for sites where a change of use is anticipated.
 - The Development Management Policies DPD which sets out general policies to guide development, which apply across the whole city.
- 4 The Site Allocations DPD sets out detailed policies and site allocations to meet the level of housing, employment and mixed use development required over the plan period. It also includes sites where change of use is anticipated or proposed. The DPD allocates a total of 82 sites for development in the plan period for a mix of uses. Approximately 3,450 new units of housing and 7 hectares of employment land are proposed.

How was the Sustainability Appraisal carried out?

- 5 The SA of the Site Allocations DPD has been undertaken independently by consultants (LUC), with some input from Norwich City Council officers. Since 2010, LUC has provided advice to Norwich City Council during the preparation of the Site Allocations DPD.
- 6 The SA has comprised five main phases of work:

SA Stage A: Deciding the scope of the SA

- 7 The first stage of the SA process, setting the context and objectives, establishing the baseline and deciding the scope of the SA, was undertaken by Norwich City Council and presented in the 2009 Site Allocations DPD SA Scoping Report. The SA

Scoping Report was published for consultation alongside the first Regulation 25 draft of the Site Allocations DPD (November 2009 – February 2010).

- 8 The Scoping Report presented the outputs of the scoping phase of the SA and development of the SA Framework (a set of sustainability objectives and criteria) against which the various components of the Site Allocations DPD have since been appraised. Two consultation responses were received from the RSPB and The Greenhouse Trust on the SA Framework following the publication of the SA Scoping Report. These comments have been taken into account in this SA report.

SA Stage B: Developing and refining options and assessing effects

- 9 Developing options for a plan is an iterative process usually involving a number of consultations with public and stakeholders. The SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan. 'Reasonable alternatives' is a term used in the SEA Directive and Regulations, and is therefore legally required to be considered when preparing a plan. The options for the Norwich Site Allocations DPD included consideration of a range of potential sites for development. There have been a number of stages in developing and refining the site options as summarised below. More explanation about the actual site options is provided further on in this Non-technical Summary.
- 'Call for Sites' (February to April 2009).
 - First stage of 'Regulation 25' (now known as Regulation 18) consultation: potential development sites (November 2009 to February 2010).
 - Second stage of 'Regulation 25' (now known as Regulation 18) consultation: shortlisted sites (January to March 2011).
 - Additional stage of 'Regulation 25' (now known as Regulation 18) consultation (July to September 2011).
 - Regulation 19 (Pre-submission) consultation (anticipated August to October 2012).

SA Stage C: Preparing the sustainability appraisal report

- 10 This SA Report details the process undertaken to date in conducting the SA of the Norwich Site Allocations DPD (Pre-Submission Version) as well as setting out the findings of the appraisal.

SA Stage D: Consultation on the Site Allocations DPD (Pre Submission Version) and this SA Report

- 11 Norwich City Council is inviting representations on the 'soundness' of the Site Allocations DPD (Pre Submission Version) and this SA Report in accordance with Regulation 19 of the Planning and Compulsory Purchase Regulations.

SA Stage E: Monitoring Implementation of the DPD

- 12 This SA Report sets out recommendations for monitoring the social, environmental and economic effects of implementing the Site Allocations DPD. These monitoring proposals should be considered within the context of the broader monitoring framework for the Local Development Framework and the Norwich City Council Annual Monitoring Report.

Character of the City of Norwich

- 13 Norwich is characterised largely by its historic townscape and its green setting with significant areas of trees and woodland, some of which form green links into the

surrounding countryside. To the west of Norwich, there are extensive areas designated as county wildlife sites associated with the floodplains of the Rivers Wensum, Tud and Yare. Norwich has been able to meet many of its recent housing development needs by utilising brownfield or previously developed sites. The 'fringe' area around Norwich benefits from a number of schemes that seek to improve its habitats, landscapes and recreational attractions. Further development of this green infrastructure could play an important role in helping to avoid increased flood risk and harm to wildlife as a result of climate change. Important wildlife sites in the city consist mainly of marshland and meadows in the river valleys and wooded former chalk pits. Norwich's distinctive townscape contains conservation areas covering 17 per cent of the total area of the city, including virtually the whole of the city centre whilst important historic features include the medieval cathedral, castle, city walls, historic parks and archaeological sites.

- 14 East Anglia is recognised as one of the driest areas of the country, with pressure on water resource supplies being linked to low rainfall, widespread agricultural water use and new residential and employment growth. Whilst it is important that new development is water efficient Anglian Water Services and the Environment Agency have stated that there are sufficient water resources to meet the growth demands until 2031. Additional wastewater treatment capacity and strategic sewers will be needed in some areas to support new development and some freshwater wildlife sites suffer from poor water quality.
- 15 Studies show that significant areas of Norwich City are at risk from flooding and that regional housing targets cannot be met by only developing in low risk areas of the city.
- 16 Norwich has successfully reduced the amount of rubbish it sends to landfill sites in recent years and Norwich City uses fewer resources and produces fewer greenhouse gases per person than greater Norwich.
- 17 Greater Norwich has the theoretical potential to meet all of its current energy needs from renewable sources with local biomass and wind generation offering the lowest cost solutions.
- 18 The Norwich area provides the largest concentration of jobs in the eastern region and the economy of Norwich is characterised by a high proportion of jobs in large businesses and in professional positions. The financial sector is a particularly important employer in Norwich City, whilst public administration, education and health are the second largest sector. Employment growth should focus on its strengths in relation to an attractive environment and knowledge based industries.
- 19 Norwich's entertainment, leisure, retail and cultural offerings are also important to its economy as are its higher education facilities. Norwich city centre has a strong regional role and a relatively strong and attractive retail offer. There is a need to maintain this competitive position by continued investment in the retail centre, including the historic environment and tourist attractions of the centre.
- 20 Although public transport is generally available across the city, approximately half of its residents travel to work by private car with travel by foot or cycle also high. Approximately 72% of Norwich's working residents work in the local area and approximately 42% of its workforce lives locally. An increasing quality of bus provision and expansion of a park and ride service to the city centre have seen some success in reducing private car use. Future proposals exist for a new road to address orbital traffic congestion as well as public transport improvements. A number of areas of poor air quality exist within the city, mainly as a result of traffic pollution. Norwich International Airport, which carries over 400,000 passengers a year, lies in Norwich City and neighbouring Broadland district.
- 21 There were an estimated 144,000 people living in Norwich in 2010 with 72% of working age and 14% pensionable age. The black and ethnic minority proportion of Norwich's total population is only half that of the regional average. Despite

being an urban area, Norwich contains significant number of groups of gypsies and travellers. Norwich ranks as significantly more deprived than neighbouring authority areas or the English average and has considerably lower educational attainment at GCSE level than the national average.

- 22 Norwich has extensive areas of terraced housing adjacent to the city centre, which, being older properties, comprise the largest proportion of homes that fail to meet the 'decent home' standards. There are higher-than-average numbers of 'vulnerable' residents in Norwich residing in non-decent homes. Norwich also contains higher proportions of households living in accommodation that is unsuitable for their needs. Norwich provides the most affordable homes in greater Norwich and contains the largest proportion in the East of England; some 36 per cent of the housing stock is social housing. Housing affordability is a problem, especially for first time buyers.

Review of other plans, policies and programmes

- 23 The Site Allocations DPD is influenced by many other plan, policies and programmes and by broader sustainability objectives. It needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and strategies, such as those relating to social policy, culture and heritage. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 24 As part of the SA, a review was undertaken of other relevant plans, policies and programmes to establish their objectives, and their implications for the Site Allocations DPD and SA. The review is detailed in the main SA Report. The most significant development for the Site Allocations DPD has been the recent publication of the new National Planning Policy Framework (NPPF) in March 2012, which replaced the existing suite of Planning Policy Statements (PPSs) and Planning Policy Guidance documents (PPGs). The NPPF is intended to streamline national planning policy, having reduced over a thousand pages of policy down to around 50 pages. Although most of the objectives within the NPPF are similar to those they replaced, there is now a strong 'presumption in favour of sustainable development'. In addition to the new NPPF, the Localism Act 2011 abolished the regional tier of the planning system such that the former Regional Assemblies and Regional Development Agencies no longer exist. However, until central Government has formally revoked the Regional Strategies they remain relevant when preparing local planning documents.

What are the key sustainability issues facing Norwich?

- 25 Reviewing the relevant plans, policies and programmes, and considering the baseline character of the area has highlighted a number of key sustainability issues facing Norwich, as set out in **Table 1** which also sets out how they are likely to change without the Site Allocations DPD. These give an indication of the environmental, social and economic character of the city of Norwich and the areas most likely to be affected by the plan. Many of the issues identified are influenced by a wide range of factors, including those outside of the control of the planning system (e.g. the state of the wider economy), but in general they are likely to continue without the combined intervention of the Joint Core Strategy, the Development Management Policies DPD, and the Site Allocations DPD, which is the subject of this SA report.

Table 1: Sustainability issues identified for Norwich

Key Sustainability Issues	Likely Evolution without the Plan
Natural and Built environment	
Pressure on the character/quality of the natural and built environments from widespread development	Likely to continue and may be exacerbated without a planned approach to development
Requirement for green spaces and green corridors in and improved walking and cycling networks	Less opportunity to adopt a co-ordinated approach to the development of green spaces/green networks and walking and cycling networks without the Plan.
Requirement to enhance the historic core of Norwich and other distinctive heritage features, by making them more able to withstand development pressures in the immediate future such as traffic growth	National policy should help to protect and enhance heritage assets but whether or not this will help specific sites is uncertain
Climate change	
Significant areas in the city are at risk of flooding, including previously developed areas	The areas at risk of flooding will increase with climate change
Flood risk in areas like the Broads can also be exacerbated by developments upstream causing a change to natural watercourses and the water cycle	Without the Plan it will be more difficult to manage the effects of developments on flood risk, although all developments would need to take account of National policy on flood risk
Adapting to the effects of climate change will need to include the ability to design developments that are water efficient and recycle water resources as Norfolk is one of the drier parts of the country	Without the Plan it will be more difficult to adopt a co-ordinated approach to adapting to climate change. Conversely, new development needs to meet higher water efficiency standards and water companies must plan to reduce leaks from the water supply network as well as improve water efficiency
New developments in all sectors, land uses and activities will need to minimise their carbon emissions. The growth in the popularity and use of Norwich Airport will also need to be addressed through carbon-saving elsewhere	<p>Emissions from new development are likely to be progressively reduced due to initiatives such as the Code for Sustainable Homes.</p> <p>Growth in use of the airport and consequent need for airport expansion is likely to be outside the direct control of local planning policy</p>
Natural Resources	
There is increasing pressure on the	This pressure will continue in the

Key Sustainability Issues	Likely Evolution without the Plan
natural resources needed to facilitate new development, which will impact on water quality and supply, air quality, energy and minerals use	absence of the Plan
There is a need to reduce the amount of waste sent to landfill sites, and find alternative methods of disposal	Management of waste will be co-ordinated and planned for separately
Transport	
Over-reliance on the car to access facilities and services	Likely to continue in line with national trends.
Access to jobs needs to be improved; this includes provision of jobs closer to centres of population	Access to jobs is likely to remain at odds with the key centres of population
Population, Access to Services and Community	
Requirement to meet the needs of an increasingly ageing population	Responding to the needs of an ageing population may be less co-ordinated in the absence of the Plan. However, all new housing developments would need to meet the requirements of Lifetime homes.
Need to create balanced and integrated communities	Creation of genuinely balanced and integrated communities may be more difficult to achieve in the absence of a Planned approach
Household sizes are becoming smaller as more people remain single for longer or become single, as a result require more homes to cater for this trend	Likely to continue in line with national trends
Deprivation	
Deprivation is highest in urban areas	Likely to continue without appropriate Policy response although this is recognised in the JCS
Health	
Promoting healthy lifestyles will be important	Consideration of healthy lifestyles (including responding to issues such as obesity) will occur at the National level. Local level initiatives e.g. public health strategies will seek to respond to Norwich-specific issues
Health infrastructure required to meet increasing overall population and	Trend likely to continue

Key Sustainability Issues	Likely Evolution without the Plan
increasingly ageing population	
Traffic-related emissions are having an effect on the population of Norwich's health and wellbeing	Trend likely to continue, although future designation of city centre-wide AQMA may prevent worsening of the issue
Need for permanent gypsy and traveller sites to improve access to key facilities such as healthcare and education	Likely to continue because of the difficulty of finding suitable sites
Crime	
Some higher crime levels exist in the urban areas, particularly the more deprived wards	Likely to continue, linked to employment opportunities, education and skill levels
Leisure, culture and recreation	
Need to provide access to a good range of cultural and leisure facilities, including improved access to local green spaces	Likely to continue. Delivery may be less co-ordinated in absence of the Plan.
Education, Skills and Employment	
The retention and attraction of young people through jobs provision and access to the housing market will be a key priority	Retention/attraction of young people to Norwich may continue to be difficult, linked to accessible employment and affordable housing
Employment businesses need support to diversify (large employers tend to be located in the city and small employers in neighbouring districts). This will be particularly important to strengthening the tourism industry, although promoting the tourism product of the area will need to be done in a sustainable way	Employment trends likely to continue
Housing	
Difficulties in accessing the housing market	Likely to continue
Requirement for housing of all types and tenures	Likely to continue, although recognised through JCS.
Existing housing stock is of poor quality	Likely to continue, although JCS is now in place and its emphasis on urban and suburban regeneration alongside specific initiatives for neighbourhood renewal will help to address this issue.

What are Norwich's sustainability objectives?

- 26 The review of other policies, plans and programmes and the identification of sustainability issues during Stage A of the SA provided the basis for a set of sustainability objectives to be developed. The sustainability objectives have been the main tool at each stage of the SA for assessing the options for the Site Allocations DPD, and comprised a number of environmental, social and economic objectives, and are shown below in **Table 2**.

Table 2: List of SA objectives

SA objective
Environmental
ENV 1 – To reduce the effect of traffic on the environment
ENV 2 – To improve the quality of the water environment
ENV3 – To improve environmental amenity, including air quality
ENV4 – To maintain and enhance biodiversity and geodiversity
ENV5 – To maintain and enhance the quality of landscapes, townscapes and the historic environment
ENV6 – To adapt to and mitigate against the impacts of climate change
ENV7 – To avoid, reduce and manage flood risk
ENV8 – To provide for sustainable use and sources of water supply
ENV9 – To make the best use of resources, including land and energy and to minimise waste production
Social
SOC1 – To reduce poverty and social exclusion
SOC2 – To maintain and improve the health of the whole population and promote healthy lifestyles
SOC3 – To improve education and skills
SOC4 – To provide the opportunity to live in a decent, suitable and affordable home
SOC5 – To build community identity, improve social welfare and reduce crime and social activity
SOC6 – To offer more opportunities for rewarding and satisfying employment for all
SOC7 – To improve the quality of where people live
SOC8 – To improve accessibility to essential services, facilities and jobs
Economy

EC1 – To encourage sustained economic growth
EC2 – To encourage and accommodate both indigenous and inward investment
EC3 – To encourage efficient patterns of movement in support of economic growth
EC4 – To improve social and environmental performance of the economy

How did the Sustainability Appraisal influence the Site Allocations DPD?

- 27 The SA was carried out at all key stages of the site selection process from the long list of sites to the final allocations. Norwich City Council took into account the findings of the SA at each stage along with consultation responses. Recommendations arising from the SA were considered by Council Officers when preparing the final Site Allocations DPD and were also reported to Council Members as appropriate.

What are the sustainability effects of the Site Allocations likely to be?

- 28 The Site Allocations DPD proposes allocating 36 sites in the City Centre, these are numbered CC1-CC35 (with CC19a and CC19b in two parts) and 46 sites in the remainder of the city outside the defined City Centre area (site references R1-R46). A summary of the potential sustainability effects of the sites is provided below in **Tables 3 to 5**. The site codes are shown in the left-hand column. Likely sustainability effects are highlighted under the relevant SA Objective using the colours and symbols shown in the key below.

Key	
Score	Effects
++	Significant positive effect
+	Minor positive effect
0	Neutral or no effect
-	Minor negative effect
--	Significant negative effect
/	Mixed effects (e.g. -/++ minor negative effects and significant positive effects)
?	Uncertain effect

Table 3: Summary of SA scores for the sites allocated for housing in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC3	
CC3	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+	
CC12	+	-/?	0	+/-/?	+/?	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+	
CC13	++/?	-/?	+/?	+/-/?	+	++/?	-/?	+	+	+	+/?	+	+	+	+	+	+/?	+	
CC14	++/?	0	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+	
CC15	++/?	0	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+	
CC18	++/?	0	+/?	0	+	++/?	--/?	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+	
CC20	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+	
CC21	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+	
CC22	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+	
CC35	++	-/?	+/?	-/?	+	++	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+	
R2	+	+/-/?	0	+/-/?	+	+	0	+	0	++	0	+	+	+	+/-	+/-/?	+	+/-/?	+
R4	+	+/?	0	+/-/?	+/-	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+	
R6	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	++	+	+	+	+/?	+	
R7	+	+/?	0	0	+	+	0	+	+	+	+/?	+	+	0	+	+	+/?	+	
R8	+	+/?	0	+/-/?	+	+	0	+	0	+	+/?	+	++	+	+	+	+/-/?	+	
R9	++/?	+/?	+/?	+/-	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+/?	+	
R14	+	-/?	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+	
R15	+	+/-	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+	
R16	+	+/-	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+	
R17	++/?	-/?	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+/-	+/-/?	+	+/?	+	
R18	++/?	+/?	+/?	0	+	++/?	-/?	+	+	+	+/?	+	+	+/-	+/-/?	+	+/-/?	+	
R19	+	+/?	0	+	+/-	+	0	+	+	+	+/?	+	+	+/-	+	+	+/-/?	+	
R20	+/?	0	0	+/-/?	+	+/?	0	+	+	+	0	+	+	0	+/-/?	+	+/?	+	
R22	+	+/?	0	0	+	+	--/?	+	+	+	+/?	+	+	+	+/-	+/-/?	+	+/-/?	+
R25	+	0	0	+	+/?	+	0	+	+	+	+/?	+	+	+	+/-	+/-/?	+	+/-/?	+
R26	+	+/-/?	0	+/-	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+	
R27	+	+/?	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+/-	+/-/?	+	+/?	+
R28	+	-/?	0	+/-	+	+	-/?	+	+	+	+/?	+	++	+	+/-	+/-/?	+	+/-/?	+
R29	+	+/?	0	+	++	+	-/?	+	+	+	+/?	+	+	+/-	+	+	+/?	+/-	
R30	+	+/-	0	+/-	+	+	-/?	+	+	+	+/?	+	+	+/-	+/-/?	+	+/?	+	
R34	+	+/?	0	0	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+	
R35	+	+/?	0	0	++	+	0	+	0	+	+/?	+	+	+	+	+	+/-/?	+	
R36	+	0	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+/-/?	+	+/?	+	
R37	+	+	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	+	
R38	+	+/-/?	0	+/-/?	++	+	-/?	+	+	+	0	+	++	+	+	+	+/-/?	+	
R40	+	0	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	+	
R41	++	+/-/?	0	+/-/?	+	++	-/?	++/--	+	+/-	+/?	++	+	+	--/+	+	+/?	+	
R44	+	-/?	0	+/-/?	-/?	++/?	+	--/+	0	+/-/?	+	+	+	0	--/+	+	+/?	0	
R45	+	-/?	0	+/-/?	--/?	+	-/?	-/?	0	+	0	+	+	0	+	+	+/?	+	
R46	+	0	0	+/-/?	+/-	+	--/?	--	+	+/-	+/?	+	++	+	+/-	+	+/?	+	

Table 4: Summary of SA scores for the sites allocated for mixed use in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
CC1	+	0	0	+/-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC2	++/?	+	+/?	-/?	++	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC4	++/?	0	+/?	-/?	++	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC5	++/?	-/?	+/?	+/-/?	+/?	++/?	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
CC6	+	0	0	0	+	+	0	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC7	++/?	-/?	+/?	+/-/?	++	++/?	-/?	+	+	+	+/?	+	++	+	+	+	+	+/?	+	+/-/?
CC8	++/?	-/?	+/?	+/-/?	++	++/?	-/?	+	+	+	+/?	+	++	+	+	+	+	+/?	+	+/-/?
CC9	+	-/?	0	-/?	+/?	+	-/?	+	+	+	+/?	+	++	+	+	+	+/-/?	+/?	+	+/-/?
CC10	+	-/?	0	+/-/?	+	+	+	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/-/?
CC11	+	0	0	+/-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC16	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC17	++	+/-/?	+/?	+/-/?	+	++	-/?	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC19a	+	+/-/?	0	0	++	+	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC23	+	+/-/?	0	0	+	+	-/?	+	+	+	?	+	+	+	+	+	+	+/?	+	+/-/?
CC24	++/?	0	+/?	-/?	+/?	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC25	++	+	+/?	0	+	++	0	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
CC26	++	0	+/?	0	+	++	0	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/?
CC27	++/?	0	+/?	0	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/?
CC28	++/?	0	+/?	0	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/?
CC29	++/?	0	+/?	+/?	++	++/?	0	+	+	+	+/?	+	+	+	+	++	+	+/?	++	+/?
CC31	++/?	0	+/?	0	++	++/?	0	+	+	+	+/?	+	+	+	+	++	+	+/?	++	+/?
CC32	+	0	0	0	++	+	0	+	+	+	+/?	0	++	+	+	++	+	+/?	+	+/?
CC33	++/?	0	+/?	-/?	++	++/?	0	+	+	+	+/?	+	++	+	+	++	+/-/?	+/?	++	+/-/?
CC34	++/?	0	+/?	+/-/?	+/?	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
R3	+	+/?	0	+/?	+/?	+	+	+	+	+	+/?	+	+/?	+	+	+	++	+/?	+	+/?
R5	+	0	0	0	-/?	+	0	--/?	+	++/-	0	0	+	+	--/+	+	+	0	+	+/-/?
R10	++/?	+/-/?	?	+/-/?	++	++/?	-/?	++	+	+/?	?	++	+	+	+/-/?	+/?	+	+/?	+/?	+/-/?
R11	++/?	+/-/?	+/?	+/-/?	++	++/?	-/?	++	+	+	?	+	+	+	+/-/?	+/?	+	+/?	+/?	+/-/?
R12	+/?	+/-/?	0	0	+/?	+/?	-/?	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R13	+	0	0	0	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
R21	+	0	0	+/-/?	+/?	+	0	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R23	+	0	0	0	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
R24	+	0	0	0	+/?	+	0	+	+	+	+/?	+	++	+	+/-/?	+	+/-/?	+/?	+	+/?
R33	+	-/?	-/?	+/-/?	++	+	-/?	-/?	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
R39	+	+/-/?	-/?	+/-/?	+	+	-/?	-/?	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R43	+	0	0	+/-	+	++/?	+/?	+/-/?	+	+	++	0	+	+	+/-	+	++	+	+	+/-/?

Table 5: Summary of SA scores for the sites allocated for employment in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
CC19b	+/?	-/?	+/?	0	+/?	-/?	+	+	+	?	0	+	+	+	+	+/?	+	+/-/?
CC30	+	0	0	+/-/?	+	0	+	+	+	?	+	+	+	+	+	+/?	+	+/-/?
R1	+	+/-/?	0	+/-/?	+	+	+/-	+	+	0	+	+	+/-/?	+	+	+/?	+	+/-/?
R31	++	0	0	+/-/?	++	+	+	+	+	0	+	+	+/-/?	++	+	++/?	++	+/-/?
R32	+	0	?	-/?	+	+	--	+	+	0	+	+	-/?	+	+	++	+	+/-/?
R42	+	+/-/?	0	+/-/?	++/?	+	++	+	+/-	++	+	+	+	++	++	++	+	+/-/?

- 29 In general, it is considered there will be a wide range of positive and significant positive effects associated with the development of many of the sites. However, a number of potentially adverse and significant adverse effects were also identified.
- 30 In overall terms, development of the proposed housing, employment, mixed use allocated sites are likely to have **significant positive effects** on the following SA objectives, with sites with the potential for significant positive effects shown in brackets:
- ENV1 - To reduce the effect of traffic on the environment (*sites: CC13, CC14, CC15, CC18, CC35, R9, R17, R18, R41, CC2, CC4, CC5, CC7, CC8, CC17, CC24, CC25, CC26, CC27, CC28, CC29, CC31, CC33, CC34, R10, R11 & R31*).
 - ENV5 - To maintain and enhance the quality of landscapes, townscapes and the historic environment (*sites: CC20, CC21, CC22, R29, R34, R35, R38, CC1, CC2, CC4, CC7, CC8, CC11, CC19a, CC29, CC31, CC32, CC33, R10, R11, R33 & M008*).
 - ENV6 - To adapt to and mitigate against the impacts of climate change (*sites: CC13, CC14, CC15, CC18, CC35, R9, R17, R18, R41, R44, CC2, CC4, CC5, CC7, CC8, CC17, CC24, CC25, CC26, CC27, CC28, CC29, CC31, CC33, CC34, R43, R10, R11, R31 & R42*).
 - ENV9 - To make the best of resources, including land and energy to minimise waste production (*sites: R41, R10, R11 & R42*).
 - SOC2 - To maintain and improve the health of the whole population and promote healthy lifestyles (*site: R5*).
 - SOC3 - To improve education and skills (*sites: R43, R42*).
 - SOC4 - To provide the opportunity to live in a decent, suitable and affordable home (*sites: R41 & R10*).
 - SOC5 - To build community identity, improve social welfare and reduce crime and social responsibility (*sites: R6, R8, R28, R38, R46, CC7, CC8, CC9, CC32, CC33 & R24*).
 - SOC8 - To improve accessibility to essential services, facilities and jobs (*sites: CC29, CC31, CC32, CC33, R31, R42*).
 - EC1 - To encourage sustained economic growth (*sites: R3, R43 & R42*).
 - EC2 - To encourage and accommodate both indigenous and inward investment (*sites: R31, R32 & R42*).
 - EC3 - To encourage efficient patterns of movement in support of economic growth (*sites: CC29, CC33 & R31*).
- 31 It is considered that some **significant negative effects** may occur for the following SA objectives, with sites with the potential for significant negative effects shown in brackets:
- ENV5 - To maintain and enhance the quality of landscapes, townscapes and the historic environment (*site: R45*).
 - ENV7 - To avoid, reduce and manage flood risk (*sites: CC18, R22 & R46*).
 - ENV9 - To make the best of resources, including land and energy to minimise waste production (*sites: R46, R41, R44, R5 & R32*).
 - SOC7 - To improve the quality of where people live (*sites: R41, R44 & R5*).
- 32 Whilst the above list highlights a number of significant negative effects on the SA Objectives, there are several ways in which the effects could be avoided or mitigated at the planning application, construction and operational phases.

- 33 Provided the mitigation measures proposed through the Joint Core Strategy and Development Policies DPDs, as well as the Site Policies in the Site Allocations DPD are successfully implemented, the likelihood and number of significant negative effects identified for the allocated sites should be reduced.

What alternatives were considered during preparation of the Site Allocations DPD?

- 34 A large number of alternative sites for the development of new housing, employment and mixed uses have been considered by Norwich City Council during preparation of the Site Allocations DPD. There have been a number of stages in developing and refining the site options as described below.
- 35 Developers, agents, community groups and the public were asked to suggest sites for development or change of use. These sites were proposed for a variety of uses, including housing, employment, and mixed uses. The process identified approximately 170 sites.
- 36 A public consultation exercise on the initial long list of around 170 potential sites which could be developed for housing, business, retail, leisure or mixed use, took place between November 2009 and February 2010, involving a wide range of consultees, including statutory and special interest bodies and residents across the city. Three of the sites were ruled out by NCC as not being reasonable alternatives (one due to its location in neighbouring South Norfolk district and two as being too small to allocate for development).
- 37 Following the first stage of Regulation 25 consultation, and the consideration of consultation responses, a shortlist of sites was then assessed against three key objectives - suitability, sustainability and availability.
- 38 As part of the Council's assessment process, a number of sites which were included in the first round of Regulation 25 consultation were not carried forward into the second stage of Regulation 25 consultation, or were carried forward but with amended boundaries. The reasons given by Norwich City Council as to why particular sites were not carried forward were:
- Sites more appropriate for inclusion in the Development Management Policies DPD or the Northern City Centre Area Action Plan: for example where proposed sites do not involve a change of use from their current use (e.g. a site currently in employment use proposed to be allocated for employment use).
 - Sites integrated into a larger site: for example sites constrained by size and/or shape, unsuitable for development on their own but acceptable if integrated with neighbouring sites to form a better comprehensive scheme and to avoid piecemeal and stand-alone development.
 - Sites assessed to be 'unsuitable' or 'less suitable' for development, on the basis of suitability or sustainability. (A list of these sites and reasons for discounting them is contained in Appendix 4 of the Pre-submission version of the Site Allocations DPD.)
 - Sites too small to allocate: the original cut-off point for allocation was sites under 0.1 hectare in the city centre or under 0.2 hectares in the rest of the city. However, as some smaller sites can deliver relatively high density development, the threshold was relaxed to include any site that could provide 10 or more dwellings even if under the size threshold. Sites below the size threshold which can only provide less than 10 dwellings have not been carried forward; they will be treated as windfall sites.

- 39 The number of sites was reduced to 124 before the suitability, availability and sustainability assessments were undertaken. Given the potential for sites to be allocated for different uses, all the 124 sites uses were considered for SA and 82 sites were subsequently shortlisted, i.e. being suitable, available and sustainable.
- 40 Council officers carried out the suitability and availability assessments in-house, while LUC was commissioned to undertake the SA, the results of which informed the Council's shortlisting process, and were published in the December 2010 SA Report as part of the second stage of Regulation 25 consultation.
- 41 At this stage, given the large number of potential sites under consideration, the SA was undertaken at a high level. Each of the sites put forward for consultation was subject to systematic assessment using a Geographical Information System (GIS). A range of criteria were used to determine potential constraints and opportunities relating to development of the sites, taking into account their proposed uses. Each criterion related to a specific SA objective or sub-objective.
- 42 The second stage of Regulation 25 consultation, on the shortlisted sites (i.e. those not discounted for the reasons summarised above), took place between January and March 2011. The December 2010 SA Report was published at this stage.
- 43 Following the second stage of Regulation 25 consultation, a number of significant changes were proposed to a number of sites which included proposed amendments to site boundaries or proposed alternative uses with some merit to be carried forward for additional consultation. A further stage of Regulation 25 consultation was then carried out between July and September 2011 for these sites. These sites were also assessed against the suitability, sustainability and availability criteria and therefore had the same status as the other shortlisted sites in the second stage of Regulation 25 consultation.
- 44 An addendum to the December 2010 SA Report was prepared by LUC and published in July 2011 to set out the findings of the SA of these additional sites.
- 45 Following on from the Regulation 25 consultation, a total of 82 sites have been included in the Regulation 19 Site Allocations DPD as described above. The majority of these sites are for housing and mixed use development with a small number of sites allocated for employment and other uses. Reasons given by Norwich City Council as to why other sites were not carried forward include:
- Sites that have been granted planning permission and are now developed or sites that have changed ownership and are no longer available for development.
 - Sites that are no longer available for development following consultation with landowners.
 - Sites more appropriate for inclusion in the Development Management Policies DPD.
 - Sites integrated into a larger site: for example sites constrained by size and/or shape, unsuitable for development on their own but acceptable if integrated with neighbouring sites to form a better comprehensive scheme and to avoid piecemeal and stand-alone development.
 - Sites assessed to be 'unsuitable' or 'less suitable' for development, on the basis of suitability or sustainability.
 - Sites too small to allocate.
- 46 This process led to their being 17 reasonable alternative sites which were not included in the Site Allocations DPD but which were subject to detailed SA. A summary of the potential sustainability effects of the reasonable alternative sites is provided below in **Table 6**.

Table 6: Summary of SA scores for the 'reasonable alternative' sites

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
Alternative housing sites																				
H004	+	-/?	0	-/?	-	+	--/?	+	+	+	+/?	+	+	0	+/-	+	+/?	N/A	+	N/A
H008	+	0	0	0	+	+	0	+	0	+	+/?	+	+	+	+	+	+/-/?	N/A	+	N/A
H011	+	-/?	0	-/?	-	+	0	--	0	+/-	0	+	+	+	--/+	+	+/?	N/A	+	N/A
M052	+	0	0	0	+	+	--/?	+	+	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
NOR0005	+	0	0	-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
NOR0128	+	0	0	-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
Alternative mixed use sites																				
E002	+	0	0	0	+/?	+	0	+	+	+	+/?	0	+	+/?	+	++	+	+/?	+	+/?
M001	+	0	0	0	--	+	--/?	+	+	+	++	+	+	+	+	+	+	+/?	+	--/+
M002	+	0	0	-/?	--	+	--/?	--	+	++/-	+	+	+	+	--/+	+	+	+/?	+	--/+
M003	+	-/?	-/?	-/?	-/?	+	--/?	+	+	+	++	+	+	+	+	+	+	+/?	+	--/+
M004	+/?	0	0	-/?	?	+/?	--/?	+	+	+	?	+	+	+	+	+	+	+/?	+	+/-/?
M005	+	0	0	-/?	+	+	0	+	+	+	+/?	0	+	+	+	+	+	+/?	+	+/-/?
M008	+	0	0	-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
M009	+	-/?	0	-/?	--/?	+	--/?	-/?	0	+	0	+	+	+/?	+	+	+/-/?	0	+	--/+
M048	+	-/?	0	-/?	?	+	0	+	+	+	0	+	+	0	+/-	+	+/-/?	+/?	+	+/-/?
M056	+	0	0	-/?	+	+	0	+	+	+	+/?	+	+	+	+/-	++	+	+/?	+	+/-/?
Alternative employment sites																				
E002	+	0	0	0	+/?	+	0	+	+	+	?	N/A	0	+	?	+	+	+/?	+	+/?

What could be done to make the Site Allocations DPD even better?

47

A number of recommendations have been made with regard to improvements or amendments that could be made to the site policies in order to strengthen and improve the sites likely sustainability effects. A summary of recommendations, by SA Objective, is set out below:

- **ENV1, ENV3 and ENV 6** - It is recommended that where sites are proposed to be car free, the intention to develop car free developments is stated specifically in the site policies. This would strengthen the likelihood of car free development occurring. It is recognised that Development Management Policy DM32 sets out criteria for residential development to be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur.
- **ENV4** - In order to strengthen the likelihood of positive effects on biodiversity, we recommend that where intentions to maintain, protect or enhance biodiversity is stated in the supporting text to a site policy, the policy itself makes this explicit. In particular, it is recommended that site Policy CC1 is expanded to make reference to retaining and enhancing the wooded ridge which is located on part of the site and forms part of Richmond Hill. It is considered that all policies for development of sites on greenfield land should be amended to include measures to avoid, reduce or compensate for the loss of biodiversity.
- **ENV5**- a number of site specific recommendations have been made in relation to this objective, which would involve adding text to the policy as follows:
 - **CC12** – The need to respect the setting of neighbouring listed and locally listed buildings.
 - **CC5** –The need to respect the setting of on site listed buildings.
 - **CC24** –The need to respect the setting of nearby listed and locally listed buildings and the City Wall.
 - **CC34** - The need to respect the setting of nearby locally listed buildings and the line of the City Wall.
 - **R3** - The need for the development not to be dominated by car parking.
 - **R13** – The need to create a street frontage to Aylsham Road.
 - **R24** –The need to create a street frontage to Aylsham Road.
- **ENV5** – It is recommended that where sites are within close proximity to the Broads National Park relevant site policies or the supporting text to the policy should make reference to the need to protect the setting of the National Park.
- **ENV7** - It is recommended that a commitment to mitigate flood risk at sites located in a Critical Drainage Area is included as a requirement in the relevant site policies.
- **SOC7** - it is considered that where noise has been identified as a potential issue, the requirement for a noise assessment and appropriate mitigation should be set out in the site policy.
- **EC4** - Site policy recommendations set out under SA Objective ENV3, ENV4, ENV5 and ENV7 will also apply to SA objective EC4 – To improve the social and environmental performance of the economy.

How will the sustainability effects of the Site Allocations DPD be monitored?

48

Monitoring of the Site Allocations DPD will be focussed on:

- The significant sustainability effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused).

- The significant effects where there is uncertainty in the SA and where monitoring would enable preventative or mitigation measures to be taken.
- 49 It will be conducted as part of an overall approach to monitoring the sustainability effects of the Site Allocations DPD alongside the Joint Core Strategy and Development Management Policies DPD, and should be incorporated within other monitoring requirements (i.e. the Annual Monitoring Report).
- 50 A table is included within the full SA Report, which summarises the significant effects (both positive and negative) to be monitored for Norwich's Site Allocations DPD and the suggested indicators or datasets that may be able to provide an indication of the extent of those effects.

What are the next steps in the preparation of the Site Allocations DPD and its Sustainability Appraisal?

- 51 This SA Report will be published for consultation alongside the Pre Submission Site Allocations DPD. Norwich City Council is inviting consultation responses (or 'representations') on the 'soundness' of the DPD and this SA Report. The DPD will then be revised to take into account the consultation responses, and make it ready for Submission to the Secretary of State. Any significant changes to the DPD will need to be subject to SA, and if so, a revised SA Report (or addendum to this report) will be prepared. A public examination will then be held to decide if the DPD is 'sound'.

Where can I find out more about Sustainability Appraisal?

- 52 More information about SA can be found in the SA Report which follows, and on the Planning Advisory Service website: www.pas.gov.uk.

1 Introduction

- 1.1 The local plan for Norwich contains Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs). The Councils of Broadland, Norwich and South Norfolk supported by Norfolk County Council, worked together to produce a Joint Core Strategy (JCS) adopted in 2011.
- 1.2 In addition to the Joint Core Strategy (JCS), Norwich City Council is setting out its own local planning policies in two separate development plan documents for Norwich City alone: the Site Allocations and Site Specific Policies DPD, which contains detailed, site specific policies and proposals on sites where change is anticipated or proposed (and is the subject of this Sustainability Appraisal); and the Development Management Policies DPD, which sets out general policies to guide development across the whole city.
- 1.3 This report constitutes the Sustainability Appraisal (SA) Report for Norwich City Council's Pre-submission Site Allocations and Site Specific Policies DPD (hereafter referred to as the "Site Allocations DPD" for short). The SA Report has been produced alongside the DPD, and both documents are being published for consultation at the same time in order to provide the public and statutory consultation bodies¹ with an opportunity to express their opinions on the SA Report and to enable them to use it as a reference point when commenting on the 'soundness' of the Sites Allocations DPD.

Purpose of the SA

- 1.4 All local plans are required to be subject to SA under the Planning and Compulsory Purchase Act 2004. The purpose of SA is to promote sustainable development by integrating sustainability considerations in to the preparation and adoption of plans. Local Plans are also legally required to be subject to a Strategic Environmental Assessment (SEA) under the 2001 European Directive².
- 1.5 The objective of SEA, as defined in Article 1 of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development'.
- 1.6 Due to their similar requirements, there are many parallels between the SA and SEA process, but also some differences. SA includes a wider range of considerations, as it includes social and economic impacts of plans, whereas SEA is more focussed on environmental impacts. The Government guidance³ on SA shows how it is possible to satisfy both requirements through a single appraisal process i.e. a joint SA/SEA (herein referred to as SA).
- 1.7 A key output of the SA process is a Sustainability Appraisal Report which describes what elements of the Site Allocations DPD have been appraised and how, and the likely significant sustainability effects of implementation of the Norwich Site Allocations DPD.
- 1.8 **Table 1.1** below signposts how the requirements of the SEA Directive have been met within this SA report.

¹ The statutory consultation bodies in England are the Environment Agency, Natural England and English Heritage.

² Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. European Parliament and Council of the European Union (2001).

³ SA guidance is part of the Plan Making Manual hosted on the Planning Advisory Service (PAS) website .

Table 1.1: Requirements of the SEA Directive and where these have been addressed in this SA Report (after Appendix 1, SA Guidance, ODPM, 2005)

SEA Directive Requirements	Where covered?
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	Section 2, Section 4 and Appendix 7.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Section 4 and Appendix 6.
c) The environmental characteristics of areas likely to be significantly affected	Section 4 and Appendix 6.
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Section 4 and Appendix 6.
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation	Appendix 7.
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects)	Section 5 and Annex 1.
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Section 5.
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Section 3.
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	Section 6.

SEA Directive Requirements	Where covered?
j) a non-technical summary of the information provided under the above headings	A separate non-technical summary document has been produced to accompany this SA report.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Addressed throughout this SA report.
Consultation: <ul style="list-style-type: none"> authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Art. 5.4) 	Consultation on the SA Scoping Report was undertaken in 2009.
<ul style="list-style-type: none"> authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2) 	Consultation is being undertaken in relation to this SA report alongside the Pre-submission Site Allocations DPD.
<ul style="list-style-type: none"> other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7). 	N/A
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)	
Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed: <ul style="list-style-type: none"> the plan or programme as adopted a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and the measures decided concerning monitoring (Art. 9) 	To be addressed at a later stage in the SA process.
Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10)	To be addressed at a later stage in the SA process.
Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).	This table demonstrates where the requirements of the SEA Directive have been met.

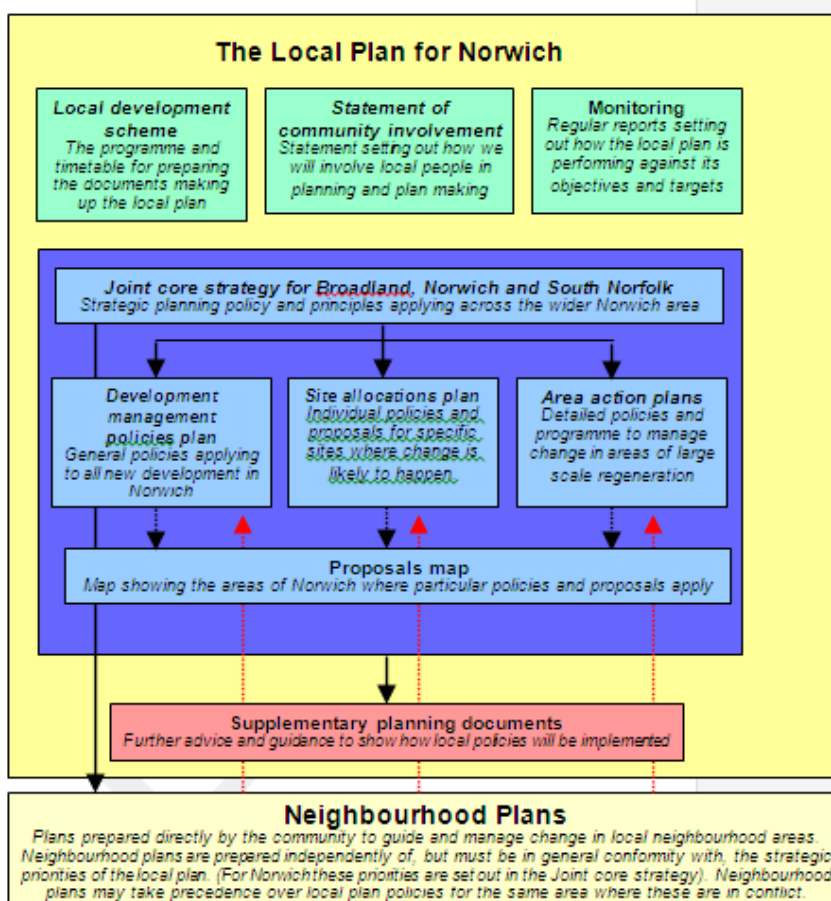
Structure of the SA Report

- 1.9 This introductory section (**Section 1**) provides background information regarding the preparation of the Site Allocations DPD and explains the requirement to undertake SA. The remainder of the main body of this report is structured as follows:
- Section 2 – The Site Allocations and Site Specific Policies DPD** summarises the content and structure of the DPD.
- Section 3 – Sustainability Appraisal Methodology and Framework** describes the methodology that has been used for the SA, lists the SA objectives that have been used to appraise the Site Allocations DPD and describes any difficulties that have been encountered during the process.
- Section 4 – Baseline Characterisation and Plan and Programme Review** provides a description of the key environmental, social and economic characteristics of the City of Norwich, the key sustainability issues facing the City, and relevant national and local policy objectives that taken together provide context for the sustainability appraisal.
- Section 5 – Appraisal of Site Allocations and Reasonable Alternatives** describes the findings of the appraisal of the site specific proposals, which have been considered to date and include possible sites for residential, employment and open space development, as well as reasonable alternatives.
- Section 6 – Conclusions** summarises the key conclusions of the SA of the Site Allocations DPD, and describes proposals for monitoring the potential sustainability effects of implementing the DPD.

2 The Site Allocations and Site Specific Policies DPD

- 2.1 As described in Chapter 1, although many authorities have opted to prepare a single plan under the new government requirements for local planning, in addition to the Joint Core Strategy that covers Norwich along with Broadland and South Norfolk, Norwich City Council is continuing the approach of setting out local planning policies in two separate development plan documents:
- The Site Allocations DPD contains detailed, site specific policies and proposals for sites where a change of use is expected; and
 - The Development Management Policies DPD which sets out general policies to guide development, which apply across the whole city.
- 2.2 Norwich City Council's Site Allocations DPD has been prepared in accordance with the policies and proposals set out in the adopted JCS and the policies of City Council's draft Development Management Policies DPD. The relationship and conformity of the Site Allocations DPD to other documents within the Local Development Framework is set out in the Local Development Scheme⁴ (LDS) and reproduced in **Figure 2.1**.

Figure 2.1 Documents making up the new local planning framework for Norwich



⁴ Local Development Scheme for Norwich 2009 to 2012, Norwich City Council, March 2010.

- 2.3 The Joint Core Strategy, prepared by the Greater Norwich Development Partnership (GNDP) formed from constituent planning authorities in the greater Norwich area, for Broadland, Norwich and South Norfolk was adopted by the three Councils in March 2011. The Joint Core Strategy sets out the council's vision, objectives and strategic policies on important issues such as housing, employment and shopping. The Joint Core Strategy sets out the long-term vision and objectives for the area, including strategic policies for steering and shaping development. It identifies broad locations for new housing and employment growth and changes to transport infrastructure and other supporting community facilities, as well as defining areas where development should be limited.
- 2.4 On the 3rd May 2011 Broadland, Norwich and South Norfolk Councils received a legal challenge to the adoption of the JCS. The judge ruled in February 2012 that the JCS remains adopted except for growth in Broadland. Planning determinations will still be made in accordance with the Development Plan unless material planning considerations indicate otherwise. The GNDP is in the process of undertaking work necessary to address the issue of growth in Broadland.
- 2.5 The Joint Core Strategy's spatial planning objectives are derived from the Sustainable Community Strategies for each of the three districts and in summary are:
- Objective 1: to minimise the contributors to climate change and address its impact.
 - Objective 2: to allocate enough land for housing, and affordable housing, in the most sustainable settlements.
 - Objective 3: to promote economic growth and diversity and provide a wide range of jobs.
 - Objective 4: to promote regeneration and reduce deprivation.
 - Objective 5: to allow people to develop to their full potential by providing educational facilities to support the needs of a growing population.
 - Objective 6: to make sure people have ready access to services.
 - Objective 7: to enhance transport provision to meet the needs of existing and future populations while reducing travel need and impact.
 - Objective 8: to positively protect and enhance the individual character and culture of the area.
 - Objective 9: to protect, manage and enhance the natural, built and historic environment, including key landscapes, natural resources and areas of natural habitat or nature conservation value.
 - Objective 10: to be a place where people feel safe in their communities.
 - Objective 11: to encourage the development of healthy and active lifestyles.
 - Objective 12: to involve as many people as possible in new planning policy.

Structure of the Site Allocations DPD

- 2.6 The Site Allocations DPD sets out detailed policies and site allocations to meet the level of housing, employment and mixed use development required over the plan period. It also includes for sites where change of use is anticipated or proposed. The DPD allocates a total of 82 sites for development in the plan period for a mix of uses. Approximately 3,450 new units of housing and 7 hectares of employment land are proposed.
- 2.7 The Site Allocations DPD includes the following sections:
- **Introduction:** an explanation of its purpose and how the DPD fits within the local planning framework for Norwich.
 - **Policy Context:** setting out the national and local planning policy context for the site allocations.
 - **Site selection:** an explanation of how the plan has evolved, including how the allocated sites have been selected.

- **The Regulation 19 ('soundness') consultation:** describes the purpose of this current stage of consultation, and explains the tests of soundness with respect to development plans.
- **Appendix 1 Introduction to site allocations:** gives an overview of the proposed site allocations in the city centre and remainder of the city area and explains the relationship with relevant policies in the JCS and Development Management Policies DPD, the approach taken to allocating sites with planning consent, as well as an overview of the specific requirements for new development proposals on individual site allocations that are referred to within the explanatory text rather than the site policies.
- **Appendix 2 City Centre site allocations:** includes the detailed site policies, explanatory text and site plans for each of the 36 city centre site allocations (Site references CC1 – CC35, with CC19 in two parts (CC19a and CC19b)).
- **Appendix 3 Site allocations in the remainder of the city:** includes the detailed site policies, explanatory text and site plans for each of the 46 site allocations in the remainder of the city (Site references R1 – R46).
- **Appendix 4 Sites not carried forward into this plan:** includes two tables – Table 1 lists the sites which have been considered for inclusion in the Site Allocations DPD but which have been discounted, and includes the reasons for their being discounted. These sites form 'reasonable alternatives' to the proposed allocations (and have been appraised through this SA). Table 2 is included for completeness. It includes sites which appeared in earlier versions of the Site Allocations DPD, but which have subsequently been amended and now appear in a different form, for example where a smaller site has been merged with another site to form a more viable allocation. It also includes sites which are part of designated employment areas where no change of use is proposed, and therefore no allocation is required; and sites which are judged to be unavailable for development in the plan period.

Reasons for Choosing the Plan

- 2.8 The adopted JCS sets out the strategy for growth of the Norwich policy area. Objective 2 of the plan is 'to allocate enough land for housing, and affordable housing, in the most sustainable settlements'.
- 2.9 The JCS promotes the city centre as the main focus in the sub-region for retail, leisure and office development, with housing and educational development also adding to the vibrancy of the centre (policy 11).
- 2.10 The JCS identifies the Norwich policy area (defined as the Norwich urban area and the first ring of fringe villages) as the focus for major growth and development over the lifetime of the plan.
- 2.11 The Strategic Housing Land Availability Assessment (SHLAA) demonstrates that there is sufficient deliverable and developable land available to meet the JCS housing requirements in the Norwich Policy Area, and in particular demonstrates the realistic capacity of Norwich to accommodate housing and thus minimise the need for greenfield development outside the city.
- 2.12 Objective 4 of the JCS promotes economic growth and diversity and provision of a wide range of jobs. Existing employment sites will be safeguarded and enough land for employment development will be allocated to meet the needs of inward investment, new businesses and existing businesses wishing to expand or relocate.
- 2.13 The JCS aims to strike a balance between the need for additional jobs and housing growth in the city to 2026 with the need to protect the city's environmental assets and high quality of life. The level of new development proposed in the Site Allocations DPD reflects this consideration, and will provide for new growth to meet JCS targets (which are based on evidence such as the SHLAA and 2008 Employment Growth and Sites and Premises study).
- 2.14 The Site Allocation DPD also sits within the context of the recently published National Planning Policy Framework (NPPF). The NPPF is strongly pro-development, and creates a presumption in favour of sustainable development. It places great emphasis on the promotion of sustainable economic development through the planning system.

- 2.15 The NPPF's objectives which are most relevant to the Site Allocations plan are to:
- Allocate sites to promote development and flexible use of land, bringing forward new land where necessary, and provide detail on the form, scale, access and quantum of development where appropriate.
 - Deliver a wide choice of high quality homes that people want and need, and increase the supply of housing.
 - Create sustainable, inclusive and mixed communities, including through the regeneration and renewal of areas of poor housing
 - Plan proactively to meet the development needs of business and support an economy fit for the 21st century.
 - Promote the vitality and viability of town centres, and meet the needs of consumers for high quality and accessible retail services.
 - Ensure viability and deliverability of development.
- 2.16 All the sites proposed in the Site Allocations DPD have gone through a selection process which has comprised a number of stages including several rounds of public consultation.
- 2.17 The reasons for rejecting sites has been multi-faceted and has included:
- Sites being more appropriate for inclusion in designations (such as employment areas) as proposed in the Development Management Policies DPD.
 - Sites assessed to be 'unsuitable' or 'less suitable' for development, on the basis of suitability and sustainability criteria.
 - Sites too small to allocate
 - Their existing uses are too valuable to be lost e.g. existing open space or employment uses.
 - Sites likely to have an overbearing effect on key heritage assets such as the Cathedral or are located in Flood Zone 3.
- 2.18 In selecting the preferred site allocations, it has not been possible to overcome all possible constraints. For example, the Level 2 Strategic Flood Risk Assessments have identified that Norwich City Council cannot meet the Joint Core Strategy housing targets for dwelling numbers wholly within Flood Zone 1 and therefore development sites within Flood Zone 2 have had to be explored.
- 2.19 The site selection process has resulted in allocations for a total of 82 sites, many of which are for mixed use development and for housing, with a small number of sites allocated for employment, and for other uses.
- 2.20 The justification for choosing the preferred sites will be set out in a report accompanying the Site Allocation Plan titled 'Justification for Selecting Preferred Sites.' This will include reference to the SA conclusions on each site where relevant.

3 Sustainability Appraisal Methodology and Framework

- 3.1 The purpose of SA is to promote sustainable development through contributing to the integration of social, environmental and economic considerations into the preparation and adoption of plans. It should be viewed as an integral part of good plan making involving on-going iterations to identify and report on the significant effects of the plan and the extent to which sustainable development is likely to be achieved. This chapter describes the stages and tasks required in SA and how they correspond to the stages of plan preparation. It also sets out the detailed method used for this stage of the SA, to appraise the 82 allocated sites and 17 reasonable alternatives.

Stages and Tasks in SA

- 3.2 The government guidance hosted by the Planning Advisory Service introduces the SA process and explains how to carry out SA as an integral part of the plan-making process. Table 3.1 sets out the main stages of the plan-making process and shows how these correspond to the SA process.

Table 3.1: Corresponding stages in plan making and SA

DPD Step 1: Pre-production - Evidence Gathering	
SA stages and tasks	
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope <ul style="list-style-type: none"> A1: Identifying other relevant policies, plans and programmes, and sustainability objectives A2: Collecting baseline information A3: Identifying sustainability issues and problems A4: Developing the SA Framework A5: Consulting on the scope of the SA 	
DPD Step 2: Production	
SA stages and tasks	
Stage B: Developing and refining options and assessing effects <ul style="list-style-type: none"> B1: Testing the DPD objectives against the SA Framework B2: Developing the DPD options B3: Predicting the effects of the DPD B4: Evaluating the effects of the DPD B5: Considering ways of mitigating adverse effects and maximising beneficial effects B6: Proposing measures to monitor the significant effects of implementing the DPDs 	
Stage C: Preparing the Sustainability Appraisal Report <ul style="list-style-type: none"> C1: Preparing the SA Report 	

Stage D: Consulting on the Draft DPD and the Sustainability Appraisal Report

- D1: Public participation on draft DPD and the SA Report
- D2(i): Appraising significant changes

DPD Step 3: Examination

SA stages and tasks

- D2(ii): Appraising significant changes resulting from representations

DPD Step 4 & 5: Adoption and Monitoring

SA stages and tasks

- D3: Making decisions and providing information

Stage E: Monitoring the significant effects of implementing the DPD

- E1: Finalising aims and methods for monitoring
- E2: Responding to adverse effects

SA Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

- 3.3 The first stage of the SA process, setting the context and objectives, establishing the baseline and deciding the scope, was undertaken by Norwich City Council and presented in the 2009 Site Allocations DPD SA Scoping Report⁵.
- 3.4 The preparation of the Scoping Report involved the following main tasks:
- Review of relevant international, national, regional, county and local level plans, programmes, strategies and studies.
 - Collection of baseline information and characterisation of Norwich city.
 - Identification of key sustainability issues and problems in Norwich city.
 - Development of an SA Framework (i.e. sustainability objectives against which to assess potential impacts of the Site Allocations DPD).
 - Description of the SA methodology proposed.
 - Consultation with the three SEA Consultation Bodies (i.e. Natural England, English Heritage, Environment Agency) and other stakeholders.
- 3.5 The SA Scoping Report was published for consultation alongside a summary version of the Site Allocations DPD and about 170 potential sites which could be developed for housing, business, retail, leisure or mixed use, from 30 November 2009 to 5 February 2010.
- 3.6 In 2010, the SA Scoping Report was amended to reflect a revised GIS based SA methodology (further information of the SA methodology is provided below). Consultation on this revised methodology was undertaken in October 2010 with a number of key consultees.
- 3.7 Two consultation responses were received from the RSPB and The Greenhouse Trust on the SA Framework following the publication of the SA Scoping Report. Three consultation responses were received on the revised SA methodology from The Greenhouse Trust, Norfolk County Council and English Heritage. A description of the comments and how these have been addressed is provided in **Appendix 3**.

⁵ Norwich Local Development Framework Draft Site Allocations Development Plan Document Sustainability Appraisal Scoping Report, November 2009, Norwich City Council.

Refinement of the SA Framework for appraising the Site Allocations DPD

- 3.8 During Stage B of the appraisal process, the SA framework was reviewed to ensure the objectives and criteria were fit for purpose for the appraisal of sites in the Site Allocations DPD. For example, those objectives/criteria which do not have an overtly 'spatial' dimension were screened out of the assessment, and more specific assumptions developed about how each SA objective would be assessed. This is described at the relevant stage of the plan preparation process within Stage B below.

SA Stage B: Developing and refining options and assessing effects

- 3.9 Developing options for a plan is an iterative process usually involving a number of consultations with public and stakeholders. The SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan. 'Reasonable alternatives' is a term used in the SEA Directive and Regulations, and are therefore legally required to be considered when preparing a plan. The options for Norwich Site Allocations DPD include potential sites for development, and there have been a number of stages in developing and refining the site options as described below.

"Call for sites" (February to April 2009)

- 3.10 Developers, agents, community groups and the public were asked to suggest sites for development or change of use. The sites put forward, along with sites identified through the Local Plan and background studies, were all included in the initial list of sites published for public consultation later in 2009 (see below). These sites were proposed for a variety of uses, including housing, employment, and mixed uses. The process identified approximately 170 sites.

First stage of Regulation 25 consultation: potential development sites (November 2009 to February 2010)

- 3.11 A public consultation exercise on the initial long list of around 170 potential sites which could be developed for housing, business, retail, leisure or mixed use, took place between November 2009 and February 2010, involving a wide range of consultees, including statutory and special interest bodies and residents across the city. Three of the sites were ruled out by NCC as not being reasonable alternatives (one due to its location in neighbouring South Norfolk district and two as being too small to allocate for development).
- 3.12 At this stage, the sites had not yet been assessed for suitability, availability/deliverability or sustainability. However, the SA Scoping Report had been prepared and published at the same time, describing how the potential sites would be appraised for sustainability.

Second stage of Regulation 25 consultation: shortlisted sites (January to March 2011)

- 3.13 Following the first stage of Regulation 25 consultation, and the consideration of consultation responses, a shortlist of sites was then assessed against three key objectives - suitability, sustainability and availability.
- 3.14 As part of the council's assessment process, a number of sites which were included in the first round of Regulation 25 consultation were not carried forward into the second stage of Regulation 25 consultation, or were carried forward but with amended boundaries. In summary, the reasons given by Norwich City Council as to why particular sites were not carried forward into the next version of the Site Allocations DPD are:
- Sites more appropriate for inclusion in the Development Management Policies DPD or the Northern City Centre Area Action Plan: for example where proposed sites do not involve a change of use from their current use (e.g. a site currently in employment use proposed to be allocated for employment use).
 - Sites integrated into a larger site: for example sites constrained by size and/or shape, unsuitable for development on their own but acceptable if integrated with neighbouring sites to form a better comprehensive scheme and to avoid piecemeal and stand-alone development.
 - Sites assessed to be 'unsuitable' or 'less suitable' for development, on the basis of suitability or sustainability. (A list of these sites and reasons for discounting them is contained in **Appendix 4** of the Pre-submission version of the Site Allocations DPD.)

- Site too small to allocate: the original cut-off point for allocation was sites under 0.1 hectare in the city centre or under 0.2 hectares in the rest of the city. However, as some smaller sites can deliver relatively high density development, the threshold has been relaxed to include any site that could provide 10 or more dwellings even if under the size threshold. Sites below the size threshold which can only provide less than 10 dwellings have not been carried forward; they will be treated as windfall sites.
- 3.15 The number of sites was reduced to 124 before the suitability, availability and sustainability assessments were undertaken. Given the potential for sites to be allocated for different uses, all the 124 sites uses were considered for SA and 82 sites were subsequently shortlisted, i.e. being suitable, available and sustainable.
- 3.16 Council officers carried out the suitability and availability assessments in-house, while independent consultants (LUC) were commissioned to undertake the sustainability appraisal, the results of which informed the council's shortlisting process, and were published in the December 2010 SA Report⁶ as part of the second stage of Regulation 25 consultation.
- 3.17 At this stage, given the large number of potential sites under consideration, the sustainability appraisal was undertaken at a high level. Each of the sites that NCC put forward for consultation was subject to systematic assessment using a Geographical Information System (GIS). A range of criteria were used to determine potential constraints and opportunities relating to development of the sites, taking into account their proposed uses. Each criterion related to a specific SA objective or sub-objective as explained below.
- 3.18 The criteria were suitable for analysis by GIS fell into two categories:
- **Those criteria that could represent constraints** on development, such as flood risk, proximity to designated nature conservation or cultural heritage sites.
 - **Those criteria that could represent opportunities**, for example potential sites allocated for a range of uses that are in close proximity to schools or close to bus stops or cycle routes.
- 3.19 Distances used were defined for the criteria on the basis of likelihood of potential significant impacts occurring (e.g. within 250m of a listed building) or on the basis of walking distance to key services and facilities as an indicator of opportunities to encourage more sustainable travel behaviour (e.g. within 600m of a secondary school).
- 3.20 NCC were asked to provide GIS data to address each of the sustainability criteria. Certain GIS data was not available at the time of preparing the report and was acknowledged as a potential limitation to the SA. The unavailable data included:
- Post Offices.
 - GP Surgeries.
 - Community Centres/Village Halls.
 - Previously Developed Land (PDL).
 - Regionally Important Geological or Geomorphological Site (RIGS).
- 3.21 Once all the GIS data had been assembled, a series of maps were produced setting out the development constraints/opportunities associated with each site.
- 3.22 The criteria were regarded as indicative and not necessarily as absolute constraints or opportunities. They were developed as a guide to determine which sites had a reasonable potential of achieving sustainability objectives. It was acknowledged that some of these sites would, in reality, be more or less constrained or offer greater or fewer opportunities than the GIS-based appraisal indicated. The importance of examining the Preferred Site Allocations in detail further on in the process, in order to validate the findings of this SA, was explicitly acknowledged in the December 2010 SA report.
- 3.23 The second stage of Regulation 25 consultation, on the shortlisted sites (i.e. those not discounted for the reasons summarised above), took place between January and March 2011. All these sites

⁶ Norwich Site Allocations DPD Sustainability Appraisal Report. Prepared for Norwich City Council by Land Use Consultants, December 2010.

were assessed as being suitable development sites allocated for a range of uses on the basis of the suitability, availability, and sustainability assessment referred to above.

- 3.24 The December 2010 SA Report was published at this stage.

Additional stage of Regulation 25 consultation (July to September 2011)

- 3.25 Following the second stage of Regulation 25 consultation, a number of significant changes were proposed to a number of sites which included proposed amendments to site boundaries or proposed alternative uses, with some merit to be carried forward for additional consultation. A further stage of Regulation 25 consultation was then carried out between July and September 2011 for these sites. These sites were also assessed against the suitability, sustainability and availability criteria and therefore have the same 'preferred sites' status as the other shortlisted sites in the second stage of Regulation 25 consultation.
- 3.26 An addendum to the December 2010 SA Report was prepared by LUC and published in July 2011 to set out the findings of the SA of these additional sites.
- 3.27 Four consultation responses were received on the December 2010 SA report and the July 2011 SA Addendums. **Appendix 3** provides a summary of the responses received on the SA work and how they have been addressed either within the DPD or this SA Report.

Regulation 19 (Pre-submission) consultation – Current stage

- 3.28 Following on from the Regulation 25 consultation described above, a total of 82 sites have been included in the Regulation 19 Site Allocations DPD. The majority of these sites are for housing and mixed use development with a small number of sites allocated for employment and other uses. 17 reasonable alternative sites have also been considered. Table **A4-1 in Appendix 4** provides an outline of the process involved in moving to selection of a preferred list of sites from the original long list of 170 sites identified in 2009. The table sets out reasons why sites considered at the Regulation 25 stage have not been included in the Regulation 19 Site Allocations DPD. Reasons given by Norwich City Council as to why particular sites were not carried forward include:
- Sites that have been granted planning permission and are now developed or sites that have changed ownership and are no longer available for development.
 - Sites that are no longer available for development following consultation with landowners.
 - Sites more appropriate for inclusion in the Development Management Policies DPD.
 - Sites integrated into a larger site: for example sites constrained by size and/or shape, unsuitable for development on their own but acceptable if integrated with neighbouring sites to form a better comprehensive scheme and to avoid piecemeal and stand-alone development.
 - Sites assessed to be 'unsuitable' or 'less suitable' for development, on the basis of suitability or sustainability.
 - Sites too small to allocate.
- 3.29 The Joint Core Strategy distinguishes between the city centre and the remainder of the urban areas and to reflect this difference in JCS policy approach, the site references for the preferred sites have been amended since the Regulation 25 consultation stage.
- 3.30 The plan proposes allocating 36 sites in the City Centre, these are numbered CC1-CC35 (with CC19a and CC19b in two parts) and 46 sites in the remainder of the city outside the defined City Centre area (site references R1-R46). **Table 3.2** below shows the relationship between the site references used at Reg 25 stage and the site references used at the current stage of the plan.

Table 3.2: Regulation 25 stage and Regulation 19 stage site references

Site reference at Reg 19 Stage	Site Reference at Reg 25 - 2&2a)	Site Name
CC01	H013(M)	60-70 Ber Street

Site reference at Reg 19 Stage	Site Reference at Reg 25 - 2&2a)	Site Name
CC02	H034	84-110 Ber Street
CC03	H034a	147-153 Ber Street
CC04	M034	10-24 Ber Street
CC05	M022	Land at Rose Lane and Mountergate
CC06	M026	Greyfriars Road/ Rose Lane
CC07	M015	St Annes Wharf Site, King Street
CC08	M017	Land at Hobrough Lane
CC09	H006	King Street Stores and adjacent land/buildings, King Street, Norwich
CC10	NOR0016	144-162 King Street
CC11	M042	Land at Garden Street
CC12	H052	Argyle Street
CC13	NOR0004	Land at Wherry Road
CC14	H035	Land at Lower Clarence Road
CC15	NOR0031	Busseys Garage Site, Thorpe Road/Lower Clarence Road
CC16	H054	Norwich Mail Centre, 13-17 Thorpe Road
CC17	M020	Land adjoining Norwich City Football Club, Kerrison Road
CC18	NOR0082	Former Hunters Squash Club, Edward Street
CC19a	n/a	Barrack Street
CC19b	n/a	Whitefriars
CC20	H043	140-154 Oak Street
CC21	NOR0067	Furniture store, 70-72 Sussex Street
CC22	NOR0065	Oak Street / Sussex Street commercial sites, 160-162 Oak Street
CC23	M018	Dukes Court (former EEB Offices), Duke Street
CC24	M036	Barn Road Car Park
CC25	M061	Norfolk House, Exchange Street
CC26	M047	Pottergate car park
CC27	M044	Land to rear of City Hall
CC28	M035	Fire Station, Bethel Street
CC29	M024	Chantry Car park, Theatre Street
CC30	E023	Mecca Bingo, All Saints Green
CC31	M012	St Stephens Towers, St Stephens Street

Site reference at Reg 19 Stage	Site Reference at Reg 25 - 2&2a)	Site Name
CC32	M013	Land and buildings at Junction of St Stephens Street and Westlegate
CC33	M023	Westlegate Tower
CC34	M057	Land at Queens Road and Surrey Street
CC35	H042	Westwick Street Car Park
R01	E008a	Livestock Market, Hall Road
R02	H005	Norfolk Learning Difficulties Centre, Ipswich Road, Norwich
R03	M038	Hall Road District Centre
R04	NOR0137	Hewitt Yard, Hall Road
R05	OU013	Part of school playing field in Hewett School, Hall Road
R06	M007	Former Lakenham Sports & Leisure Centre, Cricket Ground Road, Norwich
R07	H039	Rear of 138A Hall Road
R08	H009	John Youngs Ltd, 24 City Road, Norwich
R09	NOR0026	Aviva Car Park, Brazen Gate/Southwell Road
R10	M006	Deal Ground and May Gurney Sites, Norwich
R11	M014	Utilities Site, Norwich
R12	E015	Kerrison Road / Hardy Road Gothic Works
R13	M039	Aylsham Road District Centre
R14	NOR0099	Chalk Hill Works, Rosary Road
R15	H029b	Gas Holder at Gas Hill
R16	H029	Land east Bishop Bridge Road
R17	H029a	Land at Ketts Hill / Bishop Bridge Road
R18	NOR0092	124-128 Barrack Street
R19	NOR0093	Van Dal Shoes and garage courts
R20	H031	Start Rite Factory, Mousehold Lane
R21	M019	Land at Anthony Drive / Sprowston Road
R22	NOR0062	Industrial sites, Starling Road
R23	M039	Aylsham Road District Centre
R24	NOR0043	165-187 Aylsham Road
R25	H007	Former Pupil Referral Unit, Aylsham Road, Norwich
R26	H027	Land adjoining Lime Kiln Mews, Drayton Road
R27	H037	81-93 Drayton Road

Site reference at Reg 19 Stage	Site Reference at Reg 25 - 2&2a)	Site Name
R28	E003	Site north of Raynham Street, Norwich
R29	H032	Land at Goldsmith Street
R30	H041	231-243 Heigham Street
R31	E030-1/2	Hurricane Way, Airport Industrial Estate
R32	E001	The Paddocks, Holt Road, Norwich
R33	E005	Heigham Water Treatment Works, Waterworks Road, Norwich
R34	H028	Land at Northumberland Street, Norwich
R35	H040	120-130 Northumberland Street
R36	NOR0124	Site of former Earl of Leicester PH, 238a Dereham Road
R37	NOR0143	Land adjacent to and including 349a and 349b Dereham Road
R38	NOR0045	Industrial Sites, Havers Road
R39	M049	Mile Cross Depot
R40	H033	Norwich Community Hospital site, Bowthorpe Road
R41	M041	Three Score Bowthorpe
R42	OU003-16	Earlham Hall
R43	OU003-17	Former Blackdale School site, University of East Anglia
R44	OU003-18	Land between Suffolk Walk and Bluebell Road, University of East Anglia
R45	M009	Land west of Bluebell Road, Bartram Mowers Ltd, Norwich
R46	H047	Land at Pointers Field

3.31 **Table 3.3** below shows the 17 sites that have been considered as reasonable alternatives (the site codes for the reasonable alternative sites has not been updated since the Reg 25 stage).

Table 3.3: Regulation 19 stage reasonable alternative site references

Site Reference	Site Name
H004	Land to rear of 180 Earlham Road
HO08	Land at Northumberland Street
H011	Land at Eaton Golf Club (part)
M052	Colegate Car Park
NOR0005	Former Eaton Rise Service Station Ipswich Road

Site Reference	Site Name
NOR0128	RAF Officers' Married Quarters, Dowding Road
M001	Gooseberry Gardens and access there to via existing allotments, Cathedral Precinct
M002	Land between Hooks Walk & Ferry lane on West flank of Norwich School playing fields, Cathedral Precinct
M003	Brownes Meadow Car Park and land to rear of 20 to 24 The Close
M004	Land to rear of 9-14a The Close and car park west of Horsefair House
M005	10 Barnard Road
M008	Norfolk Tower, Surrey Street
M009	Land west of Bluebell Road, Bartram Mowers Ltd
M048	1-6b Craft Workshops Bowthorpe
M056	38 Surrey Street, Saints Court and land to north of Surrey Grove
E002*	Victoria House, Queens Road

* please note this reasonable alternative site has been assessed twice, for both potential office and retail use.

SA Stage C: Preparing the sustainability appraisal report

- 3.32 This SA Report details the process undertaken to date in conducting the SA of the Norwich Site Allocations DPD (Pre-Submission Version) as well as setting out the findings of the appraisal.

SA Stage D: Consultation on the Site Allocations DPD (Pre Submission Version) and this SA Report

- 3.33 Norwich City Council is inviting representations on the Site Allocations and Site Specific Policies DPD (Pre Submission Version) and this SA Report in accordance with Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012.

SA Stage E: Monitoring Implementation of the DPD

- 3.34 This SA Report sets out recommendations for monitoring the social, environmental and economic effects of implementing the Site Allocations DPD. These monitoring proposals should be considered within the context of the broader monitoring framework for the Local Development Framework and the Norwich City Council Annual Monitoring Report.

SA method for appraising Pre-submission Site Allocations DPD

- 3.35 This stage of the SA builds on the earlier SA work undertaken during the Scoping stage and the SA framework developed in 2009, as well as the SA of the long list of potential sites undertaken in 2010 and additional sites in 2011.
- 3.36 The full SA framework (9 Environmental Objectives, 8 Social Objectives and 4 Economic Objectives supported by sub-criteria) was reviewed in relation to each of the different development types (housing, mixed use, employment and 'other') and certain objectives and/or criteria were screened out depending on how relevant these were to the development type in question. For example, in respect of housing sites, SA Objectives *ENV8: To provide for sustainable use and sources of water supply*, *EC2: To encourage and accommodate both*

indigenous and inward investment and EC4: To improve the social and environmental performance of the economy were screened out completely.

- 3.37 In relation to mixed use sites, only objective *ENV 8* was screened out entirely.
- 3.38 In respect of employment sites, objectives *ENV 8* and *SOC4: To provide the opportunity to live in a decent, suitable and affordable home* were screened out entirely.
- 3.39 The 'other' category of sites included the Airport extension; a community facility (part of a school); and Norwich University campus extension. The Airport extension was treated as an 'Employment' site, the community facility was treated as a 'Mixed Use' site and the University campus extension was treated as a mixed use site (in respect of the employment/education component of the extension) and as 'Housing' site in respect of the student living component.
- 3.40 The full list of objectives and criteria and reasons behind screening out certain objectives/criteria is described in **Appendix 5**.
- 3.41 A set of GIS criteria was developed to support each SA objective and relevant criterion. This built on the approach established in earlier phases of the SA work, however, data gaps were filled and new relevant data added where available. For example, in relation to *ENV3: To improve environmental amenity including air quality*, GIS data on Air Quality Management Areas (AQMA) hotspots and Proximity to Waste Management Facilities was utilised to determine what the effects from different developments would be in respect of air quality – if a site was within an AQMA hotspot there was considered to be potential for development to exacerbate pollution and (if the site was proposed for housing), potential for resident's health to be affected.
- 3.42 A GIS published map file was set up with individual sites superimposed on to the various GIS constraint and opportunity layers. This enabled appraisers to spatially analyse the different effects arising from certain GIS constraints and opportunities.
- 3.43 GIS scores were added to an Access Database with Site Proformas set up for each site. A complete set of Site Proformas are provided in **Annex 1**.
- 3.44 Scores were added by appraisers drawing on the GIS data and also professional judgement (taking account of the detailed site policy wording and other available evidence). A key to the scores is provided in section 5 of this SA Report.
- 3.45 Recognising that certain objectives required a degree of locally-specific knowledge, NCC officers appraised each site in respect of objectives *ENV5: To maintain and enhance the quality of landscapes, townscapes and the historic environment*, in relation to the crime component of *SOC 5* and indirectly fed into the appraisals of *EC 4: To improve the social and environmental performance of the economy*.
- 3.46 Recommendations were put forward to minimise adverse effects identified in the appraisal of sites.
- 3.47 Once all sites had been appraised, the assessment considered the likelihood of any cumulative effects (on each SA objective), assuming all the sites were developed.

Difficulties encountered

- 3.48 As described earlier, the SA work undertaken during 2010-11 in support of the Regulation 25 Consultation versions of the Site Allocations Plan was undertaken using a GIS based approach. This offered advantages as well as limitations – the former including the opportunity to appraise large numbers of site simultaneously in a short time period. It was recognised that a more detailed appraisal of all sites and alternatives would be required further down the line; a more detailed appraisal would involve interpreting the degree of impact arising from constraints and opportunities and also taking into consideration potential mitigation, for example from other plan policies – such as Development Management Policies or through Site Specific requirements set out in site allocation policies.
- 3.49 Following a review of the earlier GIS appraisals undertaken and consulted on in 2010 and 2011 it became apparent that there were a number of data interpretation issues and one error in the

previous site analysis work. The data interpretation issues related to four of the original site analysis questions and are discussed in more detail below.

SA Question (1) Primary Schools: is the site within 600m of a Primary School?

- 3.50 The previous site analysis work in both 2010 and 2011 only considered 'primary schools' as a GIS data layer. A number of other data layers (which represent 'early years' school provision) could also have been included. These were:
- Infant.
 - Infant and Nursery
 - First.
 - First and Nursery.
 - Junior and
 - Primary and Nursery.
- 3.51 This affected the analysis undertaken in both 2010 and 2011 and meant that some of the potential development sites were previously recorded as not being within 600m of a school (i.e. scoring negatively in sustainability terms) when in fact they are.

Question 14: Is site more than 250m from a Historic Park or Garden, Scheduled Monument, Listed Building, Conservation Area or Area of Main Archaeological Interest? and

Question 14d Conservation Area: Is the site more than 250m from a Conservation Area?

- 3.52 The previous site analysis erroneously excluded a 250m buffer from Conservation Areas. This affected both the 2010 and 2011 site analysis and meant that a number of sites scored positively against sub-question 14d (i.e. were more than 250m from a Conservation Area) when they should not have been.
- 3.53 In the case of Conservation Areas, the SA team acknowledges that the 250m buffer is a rather arbitrary and crude form of analysis. The existence of a Conservation Area would not preclude the development of that site, but instead highlights that any development would need to be sensitive to the presence and setting of the Conservation Area in accordance with National Planning Policy and the policies in the Joint Core Strategy and the Development Management Policies DPD.

Question 15: Is the site more than 250m from a SAC, SPA, Ramsar, SSSI, NNR, RIG or LNR?

- 3.54 Due to difficulties in disaggregating certain datasets provided by Norwich City Council, Natural England data on Nature Conservation sites was utilised rather than Norwich data. The only difference is that Natural England data does not include all local sites - Local Nature Reserves are included (but not any sites below this tier, such as, for example, Sites of Importance for Nature Conservation). This may mean that some sites performed worse in sustainability terms, however, the net effect (i.e. when looking at the effect on question 15 as a whole) was considered to be minimal.

Question 17: Employment Area: Is the site within 600m of an Employment Area (general, single employer, proposed, office development, University Campus)?

- 3.55 The site analysis undertaken in 2010 and 2011 erroneously included 'pubs' as a form of employment. Pubs are employers but not of a scale significant enough to count in sustainability terms. Removal of this layer affected a very small number of housing sites and in sustainability terms these performed worse (i.e. are not within 600m of an Employment Area) than originally indicated.

Question 23: Employment Accessibility: Is the Employment Site within 600m of a bus stop or train station?

- 3.56 The site analysis undertaken in 2010 and 2011 considered a greater range of transport nodes than simply bus stops or train stations. However, removal of these additional transport nodes from the analysis did not make any significant difference to the original analysis reported in the December 2010 and July 2011 SA Report and Addendum.

Outcomes and Response

- 3.57 Norwich City Council was made aware of the data interpretation issues and errors with the analysis and it was agreed that the GIS assessments would be re-run with the data and buffering issues corrected. The updated GIS site assessments were provided to Norwich in order to inform their ongoing site selection work and it was agreed that the 2010 and 2011 SA Report and Addendum would be updated to reflect the revised assessment results. The updated December 2010 SA Report and 2011 SA Addendum are being made publicly available as part of this Regulation 19 consultation and the updated findings are those referred to above. The updated results tables are provided in **Appendix 1** and **2** to this report and the fully updated reports are provided as **Annex 2** and **3**.
- 3.58 Whilst it is acknowledged that errors were made in the earlier SA work, it should be noted that the GIS assessments were not used to select sites in isolation (other factors came into play including site suitability and conformity with higher tier Plans as described in the Site Allocations DPD). Furthermore, it was always intended that all preferred sites and the reasonable alternatives be fully appraised (drawing on the full range of sustainability issues and potential mitigation measures) prior to submission of the final DPD so that the sustainability effects of all reasonable options was wholly transparent. This full appraisal has now been carried out and the findings are summarised in Section 5 of this SA Report and the individual site appraisals are presented in the separate SA Annex that accompanies this report.

4 Baseline Characteristics and Plan and Programme Review

- 4.1 Baseline information provides the context for assessing the sustainability of sites in the Site Allocations DPD and it provides the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. The requirements for baseline data vary widely, but it must be relevant to environmental, social and economic issues, be sensitive to change and should ideally relate to records which are sufficient to identify trends.
- 4.2 Annex 1(f) of the SEA Directive requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors. As an integrated SA and SEA is being carried out, baseline information relating to other 'sustainability' topics has also been included, and is presented below under the headings of Environment, Economy and Society.
- 4.3 The baseline information collated in relation to Norwich was originally presented in the SA Scoping Report (2009) and this has information has been re-presented below and updated where more recent data are available, using the following data sources:
- Affordable Housing Viability Study, Drivers Jonas Deloitte (2010)
 - Air quality review and assessment: Annual progress report 2011 Norwich City Council (2011)
 - An Economic Assessment of Greater Norwich: A companion document to the Greater Norwich Economic Strategy 2009 – 2014
 - Census data 2001 (see: <http://www.ons.gov.uk/>)⁷
 - The Ecological Footprint of Norwich (2006) (see: <http://www.norfolk.gov.uk/view/ncc054983>)
 - The English Indices of Deprivation 2010 (see: <http://www.communities.gov.uk/publications/corporate/statistics/indices2010>)
 - Greater Norwich Development Partnership Affordable Housing Viability Study (2010)
 - GCSE and equivalent results in England 2009/10, Department for Education (Jan 2011)
 - Greater Norwich Development Partnership Green Infrastructure Strategy: A proposed vision for connecting people places and nature (2007)
 - Greater Norwich Green Infrastructure Delivery Plan (2009)
 - Greater Norwich Housing Market Assessment UPDATE (2009)
 - Greater Norwich Infrastructure Needs and Funding Study (2009)
 - Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report 2010-2011
 - Norfolk Transport Monitoring (2010)
 - Norwich Local development framework: Annual monitoring report 2009-10 (December 2010) Norwich City Council
 - Norwich City Council Strategic Flood Risk Assessment, Level 2: Final Report (2010)
 - Norwich Open Space Needs Assessment (2007)
 - Norwich Sub Region: Retail and Town Centres Study (2007)

⁷ Note that headline population estimates for the more recent 2011 census are expected to be released in mid-2012, with more detailed estimates to follow in 2013. Therefore, a lot of the baseline data dependent on the census has not yet been able to be updated.

- Personal communication with Norwich City Council (May 2012)
- Planning Inspectorate report on the examination of the Joint Core Strategy for Broadland, Norwich and South Norfolk Development Plan Document (Feb 2011)
- River Basin Management Plan: Anglian River Basin District (December 2009) Environment Agency

4.4 Further baseline data, organised by SA objective, are presented in **Appendix 6**.

Character of the City of Norwich

Environment

Landscape

- 4.5 Norwich is characterised largely by its historic townscape and its green setting with significant areas of trees and woodland. 25 per cent of the city's area consists of open spaces, which form green wedges into the city. These include river valleys and other open spaces such as Mousehold Heath, parks and golf courses. A number form continuous green links out to open countryside and include provision for access on foot and by cycle. The Yare Valley forms a linear green space to the south of the city, providing an attractive gateway and maintaining clear separation between the urban edge and the rural area beyond. The Wensum Valley provides a green link through the city and, in places; steep wooded ridges provide viewpoints affording long views to and from the city centre.
- 4.6 Norwich has been able to meet many of its recent housing development needs by utilising brownfield or previously developed sites. In 2010/11, 94 per cent of housing completions were on previously developed land. The high level of allocations being made on brownfield sites is likely to continue within the city.
- 4.7 The 'fringe' area around Norwich benefits from a number of schemes that seek to improve its habitats, landscapes and recreational attractions. A green infrastructure strategy was produced in 2007 to guide the landscape, recreation and natural habitat policy as the population of the area expands, with the aim of creating linked networks throughout the greater Norwich area. The historic environment and many heritage features of the Norwich urban areas also make a valuable contribution to high quality green infrastructure. The strategy identifies a number of sustainability issues specific to the greater Norwich area that green infrastructure can address including:
- Environmental character and local distinctiveness.
 - Biodiversity and the natural environment.
 - Green spaces and access networks.
- 4.8 The green infrastructure strategy has also highlighted the following issues for the Norwich area:
- To the west of Norwich, there are extensive areas designated as county wildlife sites associated with the floodplains of the River Wensum and (to a lesser extent) River Tud (in the vicinity of Costessey), and associated with the floodplain of the River Yare (in the vicinity of Cringleford). It is also important to note that part of the River Wensum upstream of Hellesdon Mill is designated as a Special Area of Conservation, of which a small area falls within the Norwich city boundary).
 - If no action is taken within the Norwich area it is considered that climate change is likely to lead to increased stress on species populations, and that effects could potentially be intensified by changes to (non-planning related) land management activities. This makes it all the more important that a green infrastructure network is put in place that supports ecosystem function and promotes resilience to environmental change. The other issue that is likely to worsen in the future under a climate change scenario is flooding. This has implications for green infrastructure, as it is important that areas are not developed that may have an 'opportunity value' when left as open space because they may be able to play a role in terms of flood prevention in the future.

Nature and historical environment

- 4.9 Key wildlife conservation designations in the city consist mainly of marshland and meadows in the river valleys and wooded former chalk pits. The only internationally designated site that falls within the Norwich City boundary is the River Wensum Special Area of Conservation (only a small part falls within the city boundary), although the Broadland Special Protection Area and Ramsar site and the Broads Special Area of Conservation lie outside the boundary to the south east and north east. Norwich also has 3.65 hectares of SSSI, with 100 per cent of these in 'favourable' or 'unfavourable recovering' condition in 2010/11. Domestic gardens play a key role in providing linked habitats and contributing to townscape in many parts of the urban area. The pressure from development on the city's natural features is reflected in there being some 455 tree preservation orders issued and more local nature reserves than elsewhere in greater Norwich.
- 4.10 Norwich's distinctive townscape contains conservation areas covering 17 per cent of the total area of the city, including virtually the whole of the city centre. Scheduled ancient monuments include the medieval cathedral, castle and city walls. 32 pre-reformation churches are located within the walled city and there is a wealth of listed buildings (1,580) and locally listed buildings (currently around 2,600, with a further 127 candidate buildings, building groups and areas on a local list supplement in preparation as at May 2012⁸). Historic parks help to define the character of many suburban areas. Preserving and enhancing the distinctive landscapes and townscapes will be a key concern when considering development within the greater Norwich urban area. Norfolk Historic Environment Record database has over 50,000 digital records online, with over 2,000 of those referring to features within Norwich City. These include buildings and sites of archaeological interest.

Table 4.1: Conservation and natural environment features in Norwich

	Type of feature	Number in Norwich
Built Heritage Features	Conservation Areas	17
	Listed Buildings	1,580
	Scheduled Ancient Monuments	24
Landscape Features	Historic Parks and Gardens	9
	Ancient Woodlands	1
	Tree Preservation Orders	455
Wildlife Conservation	International Sites (SPA, SAC, Ramsar)	1 (jointly with Broadland)
	Sites of Special Scientific Importance (SSSI)	5
	National Nature Reserve (NNR)	-
	Local Nature Reserve (LNR)	8
	County Wildlife Site (CWS)	29
	County Geodiversity Sites (CGS)	-

⁸ • Personal communication with Norwich City Council (May 2012)

Water resources

- 4.11 East Anglia is recognised as one of the driest areas of the country, with pressure on water resource supplies being exacerbated by lower rainfall, widespread agricultural water use and new residential and employment growth. Water is a shared resource and is important for tourism in the area, so the pressures from development on water resources, quality, biodiversity and flood risk are also likely to be significant across boundaries, such as within the Broads Authority area. Development should be designed to be water efficient and to protect water quality.
- 4.12 The Water cycle study highlights the potential for some water resource and water quality issues to worsen in the future as climate change leads to more frequent drought conditions.
- 4.13 Nevertheless, water resources are not considered to be the major constraint on development within this area. Anglian Water Services and the Environment Agency have stated that there are sufficient water resources to meet the growth demands until 2031. To reduce pressure on those resources though, it is important that new development is water efficient.
- 4.14 In terms of wastewater, sewage treatment works (STW) within the study area range from having no spare capacity to considerable capacity, with Whitlingham STW having the most opportunity to receive additional flows. Development to the north east of Norwich would most likely discharge to Whitlingham. New strategic sewers will be needed to serve development.
- 4.15 The capacity of the receiving watercourse will be crucial to determining where new discharge consents can be considered, or where existing ones will need to be upgraded. It is assumed that the water quality of any increase in discharge can be discounted through design engineering.
- 4.16 In terms of water quality, phosphate and nitrate loading into the river systems provides the biggest impact to environmental designated sites within the study area. The cumulative impacts of individual development should also be considered. The study notes that flood risk is most relevant on some brownfield sites in Norwich and in the area in the vicinity of the Wensum and Tud to the West of Norwich, where development is proposed in Eaton/Costessey.

Strategic Flood Risk Assessment (SFRA)

- 4.17 The Partnership of Norfolk District Councils' SFRA was published in January 2008. It examines strategic flood risk across the three authorities covered by the Joint Core Strategy together with North Norfolk DC and the Broads Authority. The document states that fluvial flooding affects the upstream areas of some catchments. In Norwich the main threat is from extreme rainfall events in the Wensum or Yare catchments. However, unless there are extreme meteorological conditions, risk is likely to be relatively low because floods will be slow to rise. The SFRA notes that groundwater and surface water flooding can be significant issues (particularly surface water flooding in urban areas). As a consequence, these issues are now being considered through a DEFRA funded Surface Water Management Plan (SWMP) for the Norwich urban area. The SWMP (currently in its pre-publication draft stage) identifies areas at the greatest risk of surface water flooding and proposes solutions. It has also informed local plan policies to address such flood risk.
- 4.18 The SFRA highlights the importance of water from further development to the north east of Norwich draining northwards to the Bure catchment, rather than southwards towards the River Wensum and Norwich. It is thought that this should be achievable, but that further investigation is needed. It will also be important to consider any indirect impact on settlements downstream on the River Bure (some of which are already at risk from flooding) of development within Norwich City.
- 4.19 In the context of evolving proposals for the greater Norwich policy area and development proposals for north east Norwich, the SuDS mapping indicates that the potential for SuDS is generally much better in areas to the north and east of Norwich than it is to the south of Norwich.
- 4.20 A level 2 strategic flood risk assessment was completed in February 2010 solely for Norwich. This study developed the findings of the previous study further, and focused on the required outputs from Planning Policy Statement 25 – Development and flood risk (this has since been superseded by the National Planning Policy Framework, however, the requirements for SFRA still remain).

4.21 Key recommendations and conclusions from this study include:

- Flood risk in Norwich is mainly fluvial, though there are tidal influences .
- There are very few areas of Norwich within Flood Zone 3 (1 in 100 year risk of flood and above).
- An extreme 1000 year event would result in significant flooding adjacent to the Wensum (zone 2).
- Flood risk defences give a degree of protection from flood in the area of the Cathedral Close and must be maintained, with developer contributions as appropriate.
- Regional housing targets cannot be met through development in zone 1 only.
- All development proposed in zones 2 and 3, is required to comply with limitations on uses in government policy in PPS25 and must be accompanied by a flood risk assessment and mitigate flooding. This includes SuDS and might also include raised floor levels and other attenuation schemes as appropriate. The study also gives detail on flood hazard to assess development potential.

Waste, energy and resources

- 4.22 Norwich has seen its recycling rate increase to 28 per cent and from 2006 to 2011, people living in the city reduced their waste collectively by over 20 per cent. This puts Norwich in the top ten areas from across the whole country for sending less waste to landfill. In the REAP report from 2006, Norwich residents were found to have a smaller ecological footprint than the rest of greater Norwich, and a lower level of CO2 emissions. However, no more up to date information is available to see if this trend continues.

Sustainable energy study

- 4.23 The sustainable energy study assesses the capacity for supplying new development with low carbon energy. The total technical potential for renewable energy within the GNDP area has been established to be 9.7 Million MWh or 163 per cent of the areas current energy consumption. Local biomass and wind resources have been identified as the lowest cost solutions to achieving zero carbon developments. The study proposes setting differing carbon standards for different parts of development sites, with stricter onsite targets for higher density areas. The fact that 70 per cent of new development within the GNDP area will consist of large scale developments should mean that low to zero carbon standards are more achievable, as the developments should be suitable for communal energy systems.

Economy

- 4.24 The Norwich area provides the largest concentration of jobs in the eastern region. The economy of Norwich is characterised by a high proportion of jobs in large businesses. 42 per cent of all jobs in Norwich are in large organisations (200+ employees). There are a significant number of high-level, professional jobs, and there is potential to increase this number.
- 4.25 The 2009 Economic Assessment of Greater Norwich showed that workers in Norwich are employed across a varied mix of sectors, though dependent on the service industry. The financial sector is particularly important (31 per cent of employment) in Norwich City, whilst public administration, education and health are the second largest sector for employment (26 per cent). The spread of employment in Norwich is seen in **Table 4.2** below, and compared against the average sector-based spread for East of England and Great Britain.

Table 4.2: Share of Employees by Sector, 2007 (Source: Economic Assessment of Greater Norwich 2009)

	Norwich (%)	East of England (%)	Great Britain (%)
Banking, Finance & Insurance, etc.	31.1%	20.7%	21.6

	Norwich (%)	East of England (%)	Great Britain (%)
Business & Professional Services	18.0%	17.7%	17.7
Construction	3.3%	5.5%	4.9
Creative Industries	6.7%	6.9%	7.7
Engineering	2.7%	4.4%	3.9
Financial Intermediation	12.1%	3.0%	4.0
Hotels & Restaurants	5.1%	5.9%	6.7
Manufacturing	7.8%	10.7%	10.6
Other Services	4.4%	4.8%	5.2
Public Administration, Education & Health	26.0%	25.5%	26.9
Retail	12.0%	11.4%	10.4
Tourism	7.3%	7.6%	8.2
Transport & Communications	5.0%	6.1%	5.9
Wholesale & Retail Trade	17.2%	18.8%	16.6

- 4.26 The evening and night-time economy is becoming increasingly important for the economy of Norwich, which has developed into something of a sub-regional hub for the cultural and evening economy; around 29,000 people visit the pubs and clubs of the city centre on a Saturday night, for example. The tourism and leisure industry accounted for approximately 7.3 per cent of total jobs in the city (2009 Economic Assessment of Greater Norwich). Norwich is also regularly ranked as one of the top ten most popular shopping destinations in the UK, with two major city centre malls and extensive pedestrianised shopping areas. Norwich city attracts five million day visitors per year for shopping, tourism and leisure interests.
- 4.27 Norwich is a regional cultural centre. For a city of its size, it is extremely well provided with a wide variety of cultural venues, including a range of theatres and museums, and the Norfolk and Norwich Millennium Library, one of the busiest libraries in the country. These facilities are mainly located within the city centre. A range of high quality and expanding higher education facilities are located in the greater Norwich area at the University of East Anglia (UEA), City College Norwich, Easton College and Norwich University College of the Arts.
- 4.28 Another notable aspect of Norwich's economy is the high retention of graduates, although they fill a large proportion of intermediate jobs for which they are over-qualified. As a consequence, this creates problems for less well-qualified people and those who grew-up in greater Norwich to access the jobs market, and it means that there are fewer opportunities to move from lower paid employment into intermediate employment.
- Greater Norwich retail and town centres study*
- 4.29 This study looks at the role of the city centre as a major regional centre as well as the roles of the smaller market towns and district centres in the greater Norwich area. The study looks at the impact of predicted population increases in the region, as well as projected increases in household expenditure and changes in retail and leisure provision.

4.30 In terms of implications for the growth in and around Norwich:

- Norwich city centre should be promoted as a retail, cultural, leisure and education centre.
- Development and investment should be directed first to existing town centres, in order to enhance their vitality and viability.
- Development should be consistent with the scale, size and function of the town centre.
- It is suggested that mixed-use retail and leisure developments at town centre or edge-of-centre locations can be effective in supporting regeneration.

4.31 The study describes Norwich city centre as having a strong regional role and a relatively strong and attractive retail offer. There is a need to maintain this competitive position by continued investment in the retail centre, including the historic environment and tourist attraction of the centre.

Employment growth and sites and premises study

4.32 The study looks at the potential for, and impact of employment growth within the greater Norwich economy up to 2026. It also includes a review for employment sites and premises which assesses existing and potential land supply.

4.33 In terms of implications for the growth in and around Norwich:

- There is a need to focus on Norwich's strengths in relation to an attractive environment, knowledge based industries and strong economic growth prospects.
- A key focus should be to sustain growth in existing and new indigenous businesses, building on the knowledge economy and assisting business start-up growth.
- There is a need to promote growth of sectors with a greater proportion of higher and intermediate level jobs, which will increase the range of opportunities for under-utilised graduates as well as have knock-on benefits for those with lower levels of skills.
- There is potential for the spatial distribution of new employment opportunities to take into account accessibility to deprived sections of the population.
- There are some (constrained) brownfield opportunities in the northern city centre.
- Construction of the Northern Distributor Road will open up new employment areas north of the city.
- There is potential to promote Norwich as an Eco City as well as to promote arts and cultural institutions.
- The improvements of the A11 should be a priority for supporting economic growth in Norwich.
- Norwich airport already provides a highly significant asset and there is potential to expand its operations
- Specific opportunities for new areas of growth could be through development of environmental engineering competencies, or possibly in creating a local retail academy
- There are shortfalls in the range and variety of industrial land, particularly for smaller firms and in rural areas.
- Sectoral initiatives are suggested to promote: science-based industries, creative industries, tourism (including linking city and market town/rural area tourism promotion), construction (including promoting the development of a skilled labour force), advanced engineering (within a technology park)' financial services, retail and food.

4.34 In terms of existing land and premises provision:

- There is a need to afford strong protection to ring road sites and newer larger allocations.
- The city centre still contains significant long term capacity.
- Norwich Research Park has great potential and is suggested as a priority.
- There is a case for developing a new north city employment hub – realising the economic potential of the airport and the proposed Northern Distributor Road.

Transport and access

- 4.35 Greater Norwich contains the Norwich International Airport, the main part being within the city of Norwich, with some operational land being in Broadland. The airport carries over 400,000 passengers a year, and is a major link for tourism and business both nationally and internationally. Despite a recent short term decline in passenger numbers, it is expected that airport usage will grow in the future. The recently refurbished train and bus stations provide essential connections to rest of the country.
- 4.36 Access to jobs and services is an important issue. Public transport is generally available across the city. However, the main form of transport according to the 2001 census remains the private motor vehicle (51.5 per cent), although a large percentage of working population commute to work by foot or cycle. **Table 4.3** below shows the different methods by which residents travel to work. Despite the fact that over half of the residents commute by private motor vehicles; this is still significantly lower than the average for the region and England. This can be attributed to the urban nature of the authority. Public transport use is relatively low compared to regional and national levels.

Table 4.3: Travel to Work Data (resident working population) from 2001 Census

Modes of Travel to Work	Private Motor Vehicle (%)	Public Transport (%)	Foot or Cycle (%)	Work mainly at home (%)
Norwich	51.5%	9.9%	31.5%	6.7%
East of England	65.8%	11.3%	12.9%	9.4%
Great Britain	62.1%	15.4%	12.8%	9.2%

- 4.37 There are 38,806 people who both live and work in Norwich. Amongst the Norwich working population, 72.4 per cent work in the area. Of the Norwich workplace population, only 41.9 per cent live in the area. This coincides with the travel to work pattern in the neighbouring districts, with such a large proportion of the population in Broadland and South Norfolk commuting to Norwich for work. **Table 4.4** below illustrates the distances travelled to work, with comparison to East of England and England figures. Table 4.4 shows that a significant proportion of people had short journeys to work, which explains why the substantial numbers that walk or cycle.

Table 4.4: Travel to Work Data (resident working population) from 2001 Census

Distances Travelled to Work	Less than 2km (%)	2-20km (%)	More than 20km (%)	Work at or mainly from home (%)
Norwich	34.2%	46.0%	8.8%	6.7%
East of England	20.6%	54.4%	19.7%	9.4%
England	20.0%	53.5%	12.6%	9.2%

- 4.38 One of the main disadvantages of motor vehicle use is the pollution that is generated. Air pollution has an impact on the health of those people working and living in the areas of concentrated pollutants, so minimising pollutants' impacts is essential. Until 2011, Norwich contained four Air Quality Management Areas. NO₂ levels in these areas were higher than the maximum allowed by DEFRA, and therefore the local authority had to reduce these. These air quality management areas were:

- St Augustines Street;
- Riverside;
- Grapes Hill;

- Castle Meadow.

- 4.39 However, the Air Quality Review and Assessment found that other areas of the city centre had exceeded the annual mean NO₂ objective (King Street and Bull Close Road). Rather than declare a new AQMA, it has been decided to declare a larger area of Norwich city centre as an AQMA and revoke the existing four AQMAs. Despite a large AQMA, it should not be assumed that air quality issues are equal across the area, but localised air quality 'hotspots' will be able to be identified within the AQMA boundaries.
- 4.40 Traffic counts show that the number of motor vehicles crossing Norwich Inner Ring Road around the city centre declined by nearly 29,000 vehicles per day for the period 1998 to 2009. The total growth rate for the period between 2003 and 2009 is -12.7 per cent with the growth per annum being -2.2 per cent. In the same period there has been an increase in the number of pedestrians and cyclists with around 2,100 more cycles crossing the Inner Ring Road now than in 2001 (Norfolk Transport Monitoring, 2010). The data also suggests that the total number of bus passengers crossing the Inner Ring Road has increased by around 10,400 per day in the ten years between 1997 and 2007. A possible reason is the increasing quality of bus provision in the Norwich area and also the expansion of Park & Ride service providing access to the city centre. There are currently six Park & Ride sites with over 5,000 parking spaces round the periphery of the city. This has led to an increase in bus patronage to the city centre and a significant reduction in vehicle miles – in excess of two million by 2006 – and consequent carbon dioxide emissions.
- 4.41 Transport improvements for the area are included in Norfolk County Council's (the Transport Authority) Local transport plan, together with the Norwich area transport strategy. Current key proposals include high quality public transport improvements, pedestrian priority measures in the centre, and a range of traffic restraint measures. Another significant project is the provision of a Northern Distributor Road (NDR) to the north of Norwich, which will address orbital traffic movements and tackle congestion problems in the northern urban fringe, whilst providing opportunities for improvements for other travel modes. Government funding for the eastern section of the NDR was agreed in principle in December 2011, conditional on the implementation of a package of sustainable transport measures in the Norwich urban area.

Society

Demographics

- 4.42 Norwich is a distinctive urban area in Norfolk. The 2001 census data showed that 121,550 people lived in Norwich, of which 16.3 per cent were under 15 years old; 66.9 were of working age and 16.8 were of pensionable age. In 2010 the mid-year estimate for the population in Norwich was 143,500. Unlike the neighbouring rural districts, the age structure in the city will remain relatively stable as identified by the projection, although the percentage of working population has grown to 71.8%, with only 14.4% of pensionable age in mid-2010⁹.
- 4.43 In the 2001 census, black and minority ethnic populations comprised 6.5 per cent of the total population in Norwich (compared with 8.6 per cent for the Eastern region and 13 per cent for England) but there is likely to have been an increase in multi-ethnicity in recent years, not as yet identified in readily available data sources. Norwich's largest ethnic minority groups in 2001 were recorded as white other (2.7 per cent), white Irish (0.69 per cent), Indian (0.43 per cent), Chinese (0.39 per cent) and other ethnic group (0.48 per cent). Generally there is more diversity found in Norwich, where roughly 7 per cent of the population were not classed as 'white British' in 2001, although this was thought to have risen to 10.6 per cent in the ONS mid-2009 population estimates.
- 4.44 Traditionally, Gypsy and Traveller communities have always been drawn to the more agricultural and rural parts of the area. Across the county of Norfolk, Gypsies and Travellers form the second largest minority ethnic population after the Portuguese. Despite being an urban area, Norwich contains significant groups - 19 pitches and 26 vans according to 2011 data held by NCC.

⁹ ONS mid-2010 data: <http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcn:77-22371>

Deprivation

- 4.45 The Index of Multiple Deprivation is used to provide a wide variety of information, which is set out in 'domains' and updated regularly, the latest update is in 2010. Each domain measures various indicators, and shows both an overall ranking score for each local authority and a score for each theme individually. There are 326 local authorities in England that the rankings are scored against, with a lower score indicating greater deprivation (i.e. 1 = most deprived, 326 = least deprived). Norwich is ranked at 70 which is performing significantly worse than neighbouring authorities.
- 4.46 There are distinct differences in deprivation levels between different areas of the city, although overall Norwich is the second most deprived local authority within the East of England, and has higher crime rates than elsewhere in greater Norwich. It is immediately apparent that deprivation in Norwich is significantly worse than in Broadland or South Norfolk districts. Within Norwich it is most notable that the south/south west sector is the least deprived (with some areas roughly on a par with Broadland and South Norfolk). There is no sector within Norwich that stands out as the most deprived, although it is noted that the western sector is relatively deprived. Health standards are not markedly different to the rest of greater Norwich.
- 4.47 Even though a high proportion of all residents in Norwich have a high level of educational qualifications (many with current or prior connections to the university), a high proportion of residents of working age have no qualifications. There are however, significant differences in qualifications gained by school leavers. Norwich has a considerably lower level of educational attainment at GCSE standard (58 per cent of school leavers had 5 or more GCSE's at A*-C standard in 2009/10) when compared to the national average (75.4 per cent). The proportion of those in employment with qualifications at 'A'-level standard or equivalent (15 per cent) is also lower than the national average (19 per cent).

Housing

- 4.48 Norwich is characterised significantly by areas of terraced housing adjacent to the city centre, which, being older properties, comprise the largest proportion of homes that fail to meet the 'decent home' standards. There are higher-than-average numbers of 'vulnerable' residents in Norwich residing in non-decent homes. Norwich also contains higher proportions of households living in accommodation that is unsuitable for their needs.
- 4.49 Average house prices in the Greater Norwich area peaked in 2007 at £207,141, although this dropped by 18 per cent to £173,836 in 2009. According to the 2011 Housing Market Assessment, prices are back to their 2006 level (£192,160), which could be mainly attributed to national trends due to insecurity in the housing market. Norwich continues to provide the most affordable homes in greater Norwich, and actually contains the largest proportion in the East of England; some 36 per cent of the housing stock is social housing.

Housing market assessment

- 4.50 The Housing market assessment sets out a detailed picture of housing supply and demand. The study looked to assess if there was an appropriate housing mix of market housing, private rented and affordable housing. Affordability in the market is a problem. This is reflected in the large number of people who apply to the council housing registers in the sub-region. There is evidence of a particular lack of affordability in the first time buyers' market. To find a property within their budget first time buyers may need to choose cheaper locations or smaller homes. Single people and couples are the largest groups on the sub-region's housing register, as in addition to being priced out the market they often struggle to afford rents.
- 4.51 The 2011 update to the assessment acknowledges that affordable housing completions are lower now (392 completed in 2009-10) than they were in the period 2006-09 (over 500 completions each year). There has been an overall decrease in number of housing completions however, with the lowest level of construction completion in 6 years recorded in 2009-10 (1,242 homes in Greater Norwich), which means that just over 30% of housing completions were affordable.
- 4.52 The Joint Core Strategy (Policy 4) sets a target for 33% for affordable housing on sites of 16 dwellings or more. The target is lowered to 30% for sites of 10 to 15 dwellings, and to 20% for sites of 5 to 9 dwellings. These targets have been agreed after recommendations in the Inspector's Report proposed to reduce the 40% target for sites of 5 dwellings or more. The

Inspector's Report was informed by the 2010 Affordable Housing Viability Study prepared by Drivers Jonas Deloitte that recommended that the original 40% target would not be viable for housing schemes of less than 15 units.

Review of Plans, Policies and Programmes

- 4.53 The Site Allocations DPD is not prepared in isolation, being greatly influenced by other plan, policies and programmes and by broader sustainability objectives. It needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and strategies, such as those relating to social policy, culture and heritage. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 4.54 As part of the scoping stage of the SA in 2009, a review was undertaken of other relevant plans, policies and programmes in relation to their objectives, targets, and indicators and their implications for the Site Allocation DPD and SA. This review has now been updated to reflect changes in the national policy context, and to capture updates to previously reviewed plans and programmes as well as new ones that have been published since 2009. **Table 4.5** lists the international, national, regional, county and local level plans and programmes that have been reviewed, and the full review is provided in **Appendix 7**.
- 4.55 The most significant development in terms of the policy context for the Site Allocations DPD has been the recent publication of the new National Planning Policy Framework (NPPF) in March 2012, which replaced the existing suite of Planning Policy Statements (PPSs) and Planning Policy Guidance documents (PPGs). The NPPF is intended to streamline national planning policy, having reduced over a thousand pages of policy down to around 50 pages. Although most of the objectives within the NPPF are similar to the in the extant PPSs and PPGs, there is now a strong 'presumption in favour of sustainable development.'
- 4.56 The NPPF also requires local plans to be 'aspirational but realistic'. This means that opportunities for appropriate development should be identified in order to achieve net gains in terms of sustainable social, environmental and economic development; however significant adverse impacts in any of those areas should not be allowed to occur.
- 4.57 In addition to the new NPPF, the Localism Act 2011 abolished the regional tier of the planning system such that the former Regional Assemblies and Regional Development Agencies no longer exist. However, until central Government has formally revoked the Regional Strategies (consultation was completed in January 2012 on the Environmental Reports on the revocation of the Regional Strategies¹⁰), they are still a material consideration when preparing local planning documents. Therefore, the East of England Regional Plan and various other regional strategies are still included in the relevant plans and programmes that have been reviewed.

Table 4.5 List of relevant international, national, regional, county and local level plans and programmes that have been reviewed

Document title
International
1. Johannesburg Declaration on Sustainable Development http://www.parliament.the-stationery-office.co.uk/pa/cm200203/cmselect/cmenvaud/98/9809.htm
2. The UNECE Convention on Access to Information, Public Participation in Decision Making and Access to Justice for Environmental Matters (The Aarhus Convention) (2001) http://europa.eu.int/comm/environment/aarhus/

¹⁰ <http://www.communities.gov.uk/planningandbuilding/planningenvironment/strategicenvironmentassess/> (Retrieved on 30th April 2012)

Document title
3. EC Directive on the assessment of the effects of certain plans and programmes on the environment 2001/42/EC
4. European Landscape Convention (2004) http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/default_en.asp
5. The Habitats Directive 92/43/EEC http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1992L0043:20070101:EN:PDF
6. The Birds Directive 2009/147/EC http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF
7. The Ramsar Convention http://www.ramsar.org/cda/en/ramsar-documents-texts-convention-on/main/ramsar/1-31-38%5E20671_4000_0
8. The Water Framework Directive 2000/60/EC http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:327:0001:0072:EN:PDF
National
9. <i>Aviation White Paper: The Future of Air transport, 2003</i> http://www.dft.gov.uk/about/strategy/whitepapers/air/
10. <i>ODPM Safer Places: The Planning System and Crime Prevention (2004)</i> http://www.communities.gov.uk/publications/planningandbuilding/saferplaces
11. <i>The Environment Act 1995</i> http://www.opsi.gov.uk/acts/acts1995/Ukpga_19950025_en_1
12. <i>National Planning Policy Framework 2012</i> http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf
13. <i>Waste Strategy for England 2007 DEFRA</i> http://www.defra.gov.uk/ENVIRONMENT/waste/strategy/strategy07/pdf/waste07-strategy.pdf
14. <i>Climate Change: The UK Programme 2006</i> http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/ukccp06-all.pdf
15. <i>Securing the Future - UK Government sustainable development strategy– March 2005</i> http://www.defra.gov.uk/sustainable/government/publications/uk-strategy/
16. <i>UK Biodiversity Habitat Action Plan for Urban Areas</i> http://www.ukbap.org.uk/UKPlans.aspx?ID=754
17. <i>Working with the Grain of Nature: A Biodiversity Strategy for England, 2002 (DEFRA)</i> http://www.defra.gov.uk/wildlife-countryside/biodiversity/action-uk/e-biostrat.htm

Document title
18. <i>The Historic Environment: A Force for the Future</i> (Department for Culture, Media and Sport) http://www.culture.gov.uk/reference_library/publications/4667.aspx
19. <i>Air Quality Strategy for England, Scotland, Wales and Northern Ireland, DEFRA 2000 and February 2003 addendum</i> http://www.defra.gov.uk/environment/airquality/strategy/
20. <i>Energy White Paper: Our Energy Future – creating a low carbon economy 2003</i> http://www.berr.gov.uk/files/file10719.pdf
21. <i>Energy Review 2006</i> http://www.berr.gov.uk/files/file31890.pdf
22. <i>Saving Lives: Our Healthier Nation White Paper 2004</i> http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4118614
23. <i>The Natural Choice: securing the value of nature 2011 DEFRA 2011</i> http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf
Regional (Note that the regional tier of planning has been removed through the Localism Act 2011, therefore the regional plans and programmes prepared by the former Regional Assembly and Regional Development Agency have been removed from this review, but until the Regional Strategies are formally revoked by Government, the East of England Plan has been left in.)
24. <i>East of England Plan</i> (May 2008) http://www.gos.gov.uk/goeast/planning/regional_planning/
25. <i>Draft East of England Plan > 2031 Draft revision to the Regional Spatial Strategy for the East of England</i> (March 2010)
26. <i>Norfolk, Suffolk and Cambridgeshire Strategic Health Authority Health Strategy (Healthy Futures) 2005-2010</i> http://www.erpho.org.uk/Download/Public/18962/1/EERA%2040%20RHS.pdf
27. <i>The Broads Plan</i> (2004) http://www.broads-authority.gov.uk/authority/publications/general-publications.html
28. <i>The Broads Core Strategy</i> http://www.broads-authority.gov.uk/planning/planning-policy/local-development-framework/core-strategy-dpd.html
29. <i>Living with Climate Change in the East of England: Summary Report</i> http://www.sustainabilityeast.org.uk/pdf/Living%20with%20Climate%20Change%20Summary.pdf
30. <i>Woodland for Life: The Regional Woodland Strategy for the East of England</i> (2003) http://www.woodlandforlife.net/wfl-rep/default.html

Document title
31. <i>Environment Agency Water Resources for the Future: A Strategy for the Anglian Region (2001)</i> http://www.environment-agency.gov.uk/static/documents/Research/wr_anglia.pdf
32. <i>Towards Sustainable Construction – A Strategy for the East of England</i> http://www.sustainabilityeast.org.uk/pdf/Towards%20Sustainable%20Construction%20-%20A%20strategy%20for%20the%20East%20of%20England.pdf
33. <i>Sustainable Communities in the East of England</i> http://www.communities.gov.uk/documents/communities/pdf/143600.pdf
34. <i>Towns and Cities Strategy – Urban Renaissance in the East of England</i> http://www.inspire-east.org.uk/townsandcitiesstrategy_1.aspx
County Plans and Programmes
35. <i>Norfolk Community Strategy (Norfolk Ambition)</i> http://www.norfolkambition.gov.uk/
36. <i>Connecting Norfolk – Norfolk’s Transport Plan for 2026</i> http://www.norfolk.gov.uk/view/NCC073526
37. <i>Biodiversity – Supplementary Planning Guidance for Norfolk</i> http://www.norwich.gov.uk/intranet_docs/A-Z/Planning%20Policy/Biodiversity_SPG_adopted_Sept04.pdf
38. <i>Norfolk Housing Support Strategy 2011-2015 (Norfolk County Council, 2010)</i> http://www.norfolk.gov.uk/view/ncc088651
39. <i>Gypsies and Travellers Strategy for Norfolk (2005-2008) Note, this is the most recent strategy available.</i> http://www.equalbutdifferent.org.uk/pdfs/Norfolk%20strategy_for_gypsies_and_travellers.pdf
40. <i>Joint Municipal Waste Strategy for Norfolk 2006-2020</i> http://www.norfolk.gov.uk/consumption/groups/public/documents/article/ncc049079.pdf
41. <i>Learning Disability Employment Plan for Norfolk (2006)</i> http://www.committees.norfolk.gov.uk/papers/cabinet/cabinet290304/cabinet290304item18apdf.pdf
42. <i>Shaping the Future: The Economic Development Strategy for Norfolk: 2001 – 2010 Note, this is the most recent strategy available.</i>
43. <i>Tomorrow's Norfolk, Today's Challenge – A Climate Change Strategy for Norfolk (2008) Note, this is the most recent strategy available.</i> http://www.norfolkambition.gov.uk/consumption/groups/public/documents/article/ncc063866.pdf
44. <i>Norfolk Action - Norfolk's Local Area Agreement 2008-11 (2008)</i> http://www.norfolkambition.gov.uk/consumption/groups/public/documents/article/ncc063700.pdf
Local Plans and Programmes

Document title
45. Greater Norwich Economic Strategy 2009-14 http://www.gndp.org.uk/content/wp-content/uploads/downloads/2010/03/GNDP_Economic_Strategy.pdf
46. JCS for Broadland, Norwich and South Norfolk, Adopted March 2011
47. City of Norwich Replacement Local Plan (2004) http://www.norwich.gov.uk/apps/local_plan/plan_index.htm#links
48. GNDP, Greater Norwich Employment Growth and Sites and Premises Study (2008) http://www.gndp.org.uk/content/wp-content/uploads/downloads/2010/03/3.Final-Report.pdf
49. Sport England, Sports Hall Provision in Norwich (2011) http://www.norwich.gov.uk/CommitteeMeetings/Sustainable%20development%20panel/Document%20Library/6/SportsHallprovisionNorwichV20111019.pdf
50. GNDP, Green Infrastructure Strategy (2007)
51 GNDP, Greater Norwich Green Infrastructure Delivery Plan (2009)
52. Partnership of Norfolk District Councils – Strategic Flood Risk Assessment (2008)
53. Norwich City Council Strategic Flood Risk Assessment level 2 (2010)
54. Norwich City Destination Strategy 2004 http://www.norwich.gov.uk/YourCouncil/Documents/TourismStrategy.pdf
55. Greater Norwich Housing Strategy 2008-2011 http://www.south-norfolk.gov.uk/democracy/866.asp
56. Norwich Area Transportation Strategy http://www.norfolk.gov.uk/consumption/idcplg?IdcService=SS_GET_PAGE&nodeId=3682
57. Norwich's Environmental Strategy 2011-2014 http://www.norwich.gov.uk/Environment/EcoIssues/Documents/EnvironmentalStrategy.pdf
58. Biodiversity Action Plan for the City of Norwich http://www.norwich.gov.uk/intranet_docs/A-Z/Green%20Spaces/Biodiveristy%20Action%20Plan%20for%20the%20City%20of%20Norwich%204.pdf
59. Greater Norwich Homelessness Strategy 2011-2014 http://www.norwich.gov.uk/Housing/HousingStrategies/documents/GNHomelessnessStrategy.pdf
60. Northern City Centre Area Action Plan (Adopted March 2010)
61. Norwich Community Safety Strategy and Audit Report Note this is the most recent version of this

Document title
strategy. http://www.norwich.gov.uk/intranet_docs/A-Z/Community/Community_Safety_Strategy.pdf
62. <i>Norwich Sustainable Communities Strategy 2008-2020</i> http://www.norwich.gov.uk/YourCouncil/CityOfNorwichPartnership/documents/Sustainablecommunitystrategy.pdf
63. <i>Norwich River Valleys Strategy 2001</i> www.norwich.gov.uk

Key sustainability issues and likely evolution without the Site Allocations DPD

- 4.58 Reviewing the relevant plans and programmes, and considering the baseline character of the area highlights a number of sustainability issues facing Norwich, as set out in **Table 4.6**. These are relevant to producing the Site Allocations DPD and have been considered throughout the SA process, in particular helping to inform the SA objectives developed at the Scoping stage. The table also sets out how these issues are likely to develop over time in the absence of the Site Allocations DPD.

Table 4.6: Key sustainability issues and their likely evolution without the Norwich Site Allocations DPD

Key Sustainability Issues	Likely Evolution without the Plan
Natural and Built environment	
Pressure on the character/quality of the natural and built environments from widespread development	Likely to continue and may be exacerbated without a planned approach to development
Requirement for green spaces and green corridors in and improved walking and cycling networks	Less opportunity to adopt a co-ordinated approach to the development of green spaces/green networks and walking and cycling networks without the Plan.
Requirement to enhance the historic core of Norwich and other distinctive heritage features, by making them more able to withstand development pressures in the immediate future such as traffic growth	National policy should help to protect and enhance heritage assets but whether or not this will help specific sites is uncertain
Climate change	
Significant areas in the city are at risk of flooding, including previously developed areas	The areas at risk of flooding will increase with climate change
Flood risk in areas like the Broads can also be exacerbated by developments upstream causing a change to natural watercourses and the water cycle	Without the Plan it will be more difficult to manage the effects of developments on flood risk, although all developments would need to take account of National policy on flood risk

Key Sustainability Issues	Likely Evolution without the Plan
Adapting to the effects of climate change will need to include the ability to design developments that are water efficient and recycle water resources as Norfolk is one of the drier parts of the country	Without the Plan it will be more difficult to adopt a co-ordinated approach to adapting to climate change. Conversely, new development needs to meet higher water efficiency standards and water companies must plan to reduce leaks from the water supply network as well as improve water efficiency
New developments in all sectors, land uses and activities will need to minimise their carbon emissions. The growth in the popularity and use of Norwich Airport will also need to be addressed through carbon-saving elsewhere	Emissions from new development are likely to be progressively reduced due to initiatives such as the Code for Sustainable Homes. Growth in use of the airport and consequent need for airport expansion is likely to be outside the direct control of local planning policy
Natural Resources	
There is increasing pressure on the natural resources needed to facilitate new development, which will impact on water quality and supply, air quality, energy and minerals use	This pressure will continue in the absence of the Plan
There is a need to reduce the amount of waste sent to landfill sites, and find alternative methods of disposal	Management of waste will be co-ordinated and planned for separately
Transport	
Over-reliance on the car to access facilities and services	Likely to continue in line with national trends.
Access to jobs needs to be improved; this includes provision of jobs closer to centres of population	Access to jobs is likely to remain at odds with the key centres of population
Population, Access to Services and Community	
Requirement to meet the needs of an increasingly ageing population	Responding to the needs of an ageing population may be less co-ordinated in the absence of the Plan. However, all new housing developments would need to meet the requirements of Lifetime homes.
Need to create balanced and integrated communities	Creation of genuinely balanced and integrated communities may be more difficult to achieve in the absence of a Planned approach
Household sizes are becoming smaller as more people remain single for longer or become single, as a result require more homes to cater for this trend	Likely to continue in line with national trends

Key Sustainability Issues	Likely Evolution without the Plan
Deprivation	
Deprivation is highest in urban areas	Likely to continue without appropriate Policy response although this is recognised in the JCS
Health	
Promoting healthy lifestyles will be important	Consideration of healthy lifestyles (including responding to issues such as obesity) will occur at the National level. Local level initiatives e.g. public health strategies will seek to respond to Norwich-specific issues
Health infrastructure required to meet increasing overall population and increasingly ageing population	Trend likely to continue
Traffic-related emissions are having an effect on the population of Norwich's health and wellbeing	Trend likely to continue, although future designation of city centre-wide AQMA may prevent worsening of the issue
Need for permanent gypsy and traveller sites to improve access to key facilities such as healthcare and education	Likely to continue because of the difficulty of finding suitable sites
Crime	
Some higher crime levels exist in the urban areas, particularly the more deprived wards	Likely to continue, linked to employment opportunities, education and skill levels
Leisure, culture and recreation	
Need to provide access to a good range of cultural and leisure facilities, including improved access to local green spaces	Likely to continue. Delivery may be less co-ordinated in absence of the Plan.
Education, Skills and Employment	
The retention and attraction of young people through jobs provision and access to the housing market will be a key priority	Retention/attraction of young people to Norwich may continue to be difficult, linked to accessible employment and affordable housing
Employment businesses need support to diversify (large employers tend to be located in the city and small employers in neighbouring districts). This will be particularly important to strengthening the tourism industry, although promoting the tourism product of the area will need to be done in a sustainable way	Employment trends likely to continue
Housing	
Difficulties in accessing the housing market	Likely to continue

Key Sustainability Issues	Likely Evolution without the Plan
Requirement for housing of all types and tenures	Likely to continue, although recognised through JCS.
Existing housing stock is of poor quality	Likely to continue, although JCS is now in place and its emphasis on urban and suburban regeneration alongside specific initiatives for neighbourhood renewal will help to address this issue.

4.59 In summary, the implications of the key sustainability issues for the Site Allocations DPD are as follows:

- As the population grows, the need to supply facilities and services, and in particular the access to them will become increasingly pressing.
- The retention and attraction of young people through jobs provision and access to the housing market will be a key priority.
- The character/quality of natural and built environments must be preserved and enhanced whilst being faced by widespread development pressure.
- The Norwich area is part of the principal access to the Broads national park, and has a critical role in promoting tourism, preserving character and protecting the environment through its spatial policies.
- Reducing contributions to, and mitigating against the impacts of, climate change will be crucial to the long-term viability of Norwich as a place to live and work, to visit and to invest in.
- Reliance on the car should be reduced through improved access to public transport and improved cycling and walking links to local facilities/services.
- Creating balanced and integrated communities will be an essential aspect of providing new development.
- Promoting healthy lifestyles will be important throughout policy.
- Lifelong learning opportunities should be increased for all members of society, particularly in providing vocational training for school leavers.
- Difficulties in accessing the housing market must be minimised.
- Housing of all types and tenures is essential for mixed communities.
- Support will be needed for further diversification and expansion of the economy.

5 Appraisal of Site Allocations and Reasonable Alternatives

- 5.1 The Norwich Pre-submission Site Allocations DPD was appraised against the SA Framework as described in Chapter 3 and this chapter summarises the main findings of the SA. The full site appraisals of the 82 allocated sites and 17 reasonable alternatives can be found in **Annex 1: Detailed Site Annex**.

Assumptions and factors taken into account during the SA

- 5.2 SA inevitably relies on an element of subjective judgement. In predicting and assessing the sustainability effects of the Site Allocations DPD we have drawn partly on our analysis of the characteristics of Norwich and the sustainability issues it faces (see Chapter 4), plus professional experience. We have also drawn on the detailed information about each site provided in the supporting text to the site allocation policies and the proposals set out in the policy text for each site. However, in order to take a consistent approach to over a hundred site appraisals, we have based our SA judgements on the criteria, assumptions and GIS data collated for each SA objective set out in **Appendix 5**.
- 5.3 It is important to understand that the SA was a desk-based exercise carried out to report the potential sustainability effects of developing the allocated sites (and reasonable alternatives) for the types of use identified in the Site Allocations DPD (i.e. housing, mixed use, employment). The SA is a strategic level exercise to inform the preparation of the DPD and therefore does not contain as much detail for each allocated site, as would be expected from an assessment that might accompany a specific development proposal at the planning application stage. There is also an element of uncertainty within the SA at this stage, as specific design and layout proposals for development at each site are unknown, therefore judgements relating to potential visual impacts or impacts on landscape/townscape or settings of listed buildings etc. cannot be formed.

Determining significance

- 5.4 Annex II of the SEA Directive sets out criteria for determining the likely significance of effects. These criteria relate to:
- The characteristics of the plan or programme (in this case the Norwich Site Allocations DPD).
 - The characteristics of the effects and of the area likely to be affected (in this case all of the sites considered).
- 5.5 In determining the significance of the effects of the Site Allocations DPD, it is important to bear in mind its relationship with the other documents that together comprise the development plan for Norwich. These include the adopted East of England Plan (until it is formally revoked) and the other Local Development Documents, such as the Joint Core Strategy and the Development Management Policies DPD. In addition, it is also important to take into account national planning policy contained in the National Planning Policy Framework.
- 5.6 However, the likely effects of the Site Allocations DPD itself need to be determined in order that their significance can be assessed. This inevitably requires a series of judgements to be made. We have set out our assumptions for each SA objective in relation to the types of effect that may occur with respect to that objective in **Appendix 5**. Our appraisal has attempted to differentiate between significant effects and other more minor effects through the use of colours and symbols as shown below.

Key	
Score	Effects
++	Significant positive effect
+	Minor positive effect
0	Neutral or no effect
-	Minor negative effect
--	Significant negative effect
/	Mixed effects (e.g. -/++ minor negative effects and significant positive effects)
?	Uncertain effect

- 5.7 The dividing line in making such a decision is often quite small. Where we have used either ++ or -- to distinguish significant effects from more minor effects (+ or -), this is because, in our judgement, the effect of housing, employment or mixed use development on the allocated site in question (or reasonable alternative) on the SA objective will be of such magnitude that it will have a noticeable and measurable effect compared with other factors that may influence the achievement of that objective.
- 5.8 Finally, the scores in the site appraisals (presented in **Annex 1**) are based on potentially significant effects of the proposed development type on each site, taking into account mitigation that might be employed during design, construction and use of the development where this has been specified in the policies for each allocated site and their supporting text. However, mitigation of potential effects may also be provided by successful implementation and use of other policies in the Joint Core Strategy and Development Management Policies DPDs, and relevant policies have been referred to in the findings summarised below.
- 5.9 Any recommendations considered necessary for avoiding or mitigating potential adverse sustainability effects have been made and summarised at the end of this chapter.

SA findings

- 5.10 This section summarises the findings of all the site appraisals, by SA objective. Within each objective, the potential impacts have been considered together for each different type of site allocation (i.e. housing, employment, mixed use) and the reasonable alternatives. The SA scores for each site are also summarised graphically within **Tables 5.1-5.4**.
- 5.11 This section also considers the likely cumulative effects on each SA objective. This is the effects that could occur if all sites are developed and is based on SA scores for individual sites as well as a wider consideration of effects.

Table 5.1 Summary of SA scores for the sites allocated for housing in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC3
CC3	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+
CC12	+	-/?	0	+/-/?	+/?	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+
CC13	++/?	-/?	+/?	+/-/?	+	++/?	-/?	+	+	+	+/?	+	+	+	+	+	+/?	+
CC14	++/?	0	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+
CC15	++/?	0	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+
CC18	++/?	0	+/?	0	+	++/?	--/?	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+
CC20	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+
CC21	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+
CC22	+	-/?	0	+/-/?	++	+	0	+	+	+	0	+	+	+	+	+	+/-/?	+
CC35	++	-/?	+/?	-/?	+	++	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+
R2	+	+/-/?	0	+/-/?	+	+	0	+	0	++	0	+	+	+/-	+/-/?	+	+/-/?	+
R4	+	+/?	0	+/-/?	+/-	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+
R6	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	++	+	+	+	+/?	+
R7	+	+/?	0	0	+	+	0	+	+	+	+/?	+	+	0	+	+	+/?	+
R8	+	+/?	0	+/-/?	+	+	0	+	0	+	+/?	+	++	+	+	+	+/-/?	+
R9	++/?	+/?	+/?	+/-	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+/?	+
R14	+	-/?	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+
R15	+	+/-	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	+
R16	+	+/-	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+
R17	++/?	-/?	+/?	+/-/?	+	++/?	0	+	+	+	+/?	+	+	+/-	+/-/?	+	+/?	+
R18	++/?	+/?	+/?	0	+	++/?	-/?	+	+	+	+/?	+	+	+/-	+/-/?	+	+/-/?	+
R19	+	+/?	0	+	+/-	+	0	+	+	+	+/?	+	+	+/-	+	+	+/-/?	+
R20	+/?	0	0	+/-/?	+	+/?	0	+	+	+	0	+	+	0	+/-/?	+	+/?	+
R22	+	+/?	0	0	+	+	--/?	+	+	+	+/?	+	+	+/-	+/-/?	+	+/-/?	+
R25	+	0	0	+	+/?	+	0	+	+	+	+/?	+	+	+/-	+/-/?	+	+/-/?	+
R26	+	+/-/?	0	+/-	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/?	+
R27	+	+/?	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+/-	+/-/?	+	+/?	+
R28	+	-/?	0	+/-	+	+	-/?	+	+	+	+/?	+	++	+/-	+/-/?	+	+/-/?	+
R29	+	+/?	0	+	++	+	-/?	+	+	+	+/?	+	+	+/-	+	+	+/?	+/-
R30	+	+/-	0	+/-	+	+	-/?	+	+	+	+/?	+	+	+/-	+/-/?	+	+/?	+
R34	+	+/?	0	0	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+
R35	+	+/?	0	0	++	+	0	+	0	+	+/?	+	+	+	+	+	+/-/?	+
R36	+	0	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+/-/?	+	+/?	+
R37	+	+	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	+
R38	+	+/-/?	0	+/-/?	++	+	-/?	+	+	+	0	+	++	+	+	+	+/-/?	+
R40	+	0	0	+/-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	+
R41	++	+/-/?	0	+/-/?	+	++	-/?	++/--	+	+/-	+/?	++	+	+	--/+	+	+/?	+
R44	+	-/?	0	+/-/?	-/?	++/?	+	--/+	0	+/-/?	+	+	+	0	--/+	+	+/?	0
R45	+	-/?	0	+/-/?	--/?	+	-/?	-/?	0	+	0	+	+	0	+	+	+/?	+
R46	+	0	0	+/-/?	+/-	+	--/?	--	+	+/-	+/?	+	++	+	+/-	+	+/?	+

Table 5.2 Summary of SA scores for the sites allocated for mixed use in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
CC1	+	0	0	+/-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC2	++/?	+	+/?	-/?	++	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC4	++/?	0	+/?	-/?	++	++/?	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC5	++/?	-/?	+/?	+/-/?	+/?	++/?	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
CC6	+	0	0	0	+	+	0	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC7	++/?	-/?	+/?	+/-/?	++	++/?	-/?	+	+	+	+/?	+	++	+	+	+	+	+/?	+	+/-/?
CC8	++/?	-/?	+/?	+/-/?	++	++/?	-/?	+	+	+	+/?	+	++	+	+	+	+	+/?	+	+/-/?
CC9	+	-/?	0	-/?	+/?	+	-/?	+	+	+	+/?	+	++	+	+	+	+/-/?	+/?	+	+/-/?
CC10	+	-/?	0	+/-/?	+	+	+	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/-/?
CC11	+	0	0	+/-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
CC16	+	0	0	+/-/?	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC17	++	+/-/?	+/?	+/-/?	+	++	-/?	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC19a	+	+/-/?	0	0	++	+	-/?	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC23	+	+/-/?	0	0	+	+	-/?	+	+	+	?	+	+	+	+	+	+	+/?	+	+/-/?
CC24	++/?	0	+/?	-/?	+/?	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
CC25	++	+	+/?	0	+	++	0	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
CC26	++	0	+/?	0	+	++	0	+	+	+	?	+	+	+	+/-/?	+	+	+/?	+	+/?
CC27	++/?	0	+/?	0	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/?
CC28	++/?	0	+/?	0	+	++/?	0	+	+	+	+/?	+	+	+	+	+	+	+/?	+	+/?
CC29	++/?	0	+/?	+/?	++	++/?	0	+	+	+	+/?	+	+	+	+	++	+	+/?	++	+/?
CC31	++/?	0	+/?	0	++	++/?	0	+	+	+	+/?	+	+	+	+	++	+	+/?	+	+/?
CC32	+	0	0	0	++	+	0	+	+	+	+/?	0	++	+	+	++	+	+/?	+	+/?
CC33	++/?	0	+/?	-/?	++	++/?	0	+	+	+	+/?	+	++	+	+	++	+/-/?	+/?	++	+/-/?
CC34	++/?	0	+/?	+/-/?	+/?	++/?	0	+	+	+	+/?	+	+	+	+/-/?	+	+	+/?	+	+/-/?
R3	+	+/?	0	+/?	+/?	+	+	+	+	+	+/?	+	+/?	+	+	+	++	+/?	+	+/?
R5	+	0	0	0	-/?	+	0	--/?	+	++/-	0	0	+	+	--/+	+	+	0	+	+/-/?
R10	++/?	+/-/?	?	+/-/?	++	++/?	-/?	++	+	+/?	?	++	+	+	+/-/?	+/?	+	+/?	+/?	+/-/?
R11	++/?	+/-/?	+/?	+/-/?	++	++/?	-/?	++	+	+	?	+	+	+	+/-/?	+/?	+	+/?	+/?	+/-/?
R12	+/?	+/-/?	0	0	+/?	+/?	-/?	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R13	+	0	0	0	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
R21	+	0	0	+/-/?	+/?	+	0	+	+	+	?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R23	+	0	0	0	+	+	0	+	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/?
R24	+	0	0	0	+/?	+	0	+	+	+	+/?	+	++	+	+/-/?	+	+/-/?	+/?	+	+/?
R33	+	-/?	-/?	+/-/?	++	+	-/?	-/?	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
R39	+	+/-/?	-/?	+/-/?	+	+	-/?	-/?	+	+	+/?	+	+	+	+/-/?	+	+/-/?	+/?	+	+/-/?
R43	+	0	0	+/-	+	++/?	+/?	+/-/?	+	+	++	0	+	+	+/-	+	++	+	+	+/-/?

Table 5.3 Summary of SA scores for the sites allocated for employment in the Site Allocations DPD

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
CC19b	+/?	-/?	+/?	0	+/?	-/?	+	+	+	?	0	+	+	+	+	+/?	+	+/-/?
CC30	+	0	0	+/-/?	+	0	+	+	+	?	+	+	+	+	+	+/?	+	+/-/?
R1	+	+/-/?	0	+/-/?	+	+	+/-	+	+	0	+	+	+/-/?	+	+	+/?	+	+/-/?
R31	++	0	0	+/-/?	++	+	+	+	+	0	+	+	+/-/?	++	+	++/?	++	+/-/?
R32	+	0	?	-/?	+	+	--	+	+	0	+	+	-/?	+	+	++	+	+/-/?
R42	+	+/-/?	0	+/-/?	++/?	+	++	+	+/-	++	+	+	+	++	++	++	+	+/-/?

Table 5.4 Summary of SA scores for the 'reasonable alternative' sites

Site Reference	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV9	SOC1	SOC2	SOC3	SOC4	SOC5	SOC6	SOC7	SOC8	EC1	EC2	EC3	EC4
Alternative housing sites																				
H004	+	-/?	0	-/?	-	+	--/?	+	+	+	+/?	+	+	0	+/-	+	+/?	N/A	+	N/A
H008	+	0	0	0	+	+	0	+	0	+	+/?	+	+	+	+	+	+/-/?	N/A	+	N/A
H011	+	-/?	0	-/?	-	+	0	--	0	+/-	0	+	+	+	--/+	+	+/?	N/A	+	N/A
M052	+	0	0	0	+	+	--/?	+	+	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
NOR0005	+	0	0	-/?	+	+	0	+	0	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
NOR0128	+	0	0	-/?	+	+	0	+	+	+	+/?	+	+	+	+	+	+/?	N/A	+	N/A
Alternative mixed use sites																				
E002	+	0	0	0	+/?	+	0	+	+	+	+/?	0	+	+/?	+	++	+	+/?	+	+/?
M001	+	0	0	0	--	+	--/?	+	+	+	++	+	+	+	+	+	+	+/?	+	--/+
M002	+	0	0	-/?	--	+	--/?	--	+	++/-	+	+	+	+	--/+	+	+	+/?	+	--/+
M003	+	-/?	-/?	-/?	-/?	+	--/?	+	+	+	++	+	+	+	+	+	+	+/?	+	--/+
M004	+/?	0	0	-/?	?	+/?	--/?	+	+	+	?	+	+	+	+	+	+	+/?	+	+/-/?
M005	+	0	0	-/?	+	+	0	+	+	+	+/?	0	+	+	+	+	+	+/?	+	+/-/?
M008	+	0	0	-/?	++	+	0	+	+	+	+/?	+	+	+	+	+	+/-/?	+/?	+	+/-/?
M009	+	-/?	0	-/?	--/?	+	--/?	-/?	0	+	0	+	+	+/?	+	+	+/-/?	0	+	--/+
M048	+	-/?	0	-/?	?	+	0	+	+	+	0	+	+	0	+/-	+	+/-/?	+/?	+	+/-/?
M056	+	0	0	-/?	+	+	0	+	+	+	+/?	+	+	+	+/-	++	+	+/?	+	+/-/?
Alternative employment sites																				
E002	+	0	0	0	+/?	+	0	+	+	+	?	N/A	0	+	?	+	+	+/?	+	+/?

Environmental objectives

ENV1 - To reduce the effect of traffic on the environment

- 5.12 **Table 5.5** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV1. All sites performed well against this objective with some significant positive effects predicted, but no significant negative effects likely to occur from the development of any site.

Table 5.5 Summary of significant effects for SA objective ENV1 – To reduce the effect of traffic on the environment

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
CC13 (++?) CC14 (++?) CC15 (++?) CC18 (++?) CC35 R9 (++?) R17 (++?) R18 (++?) R41	CC2 (++?) CC4 (++?) CC5 (++?) CC7 (++?) CC8 (++?) CC17 CC24 (++?) CC25 CC26 CC27 (++?) CC28 (++?) CC29 (++?) CC31 (++?) CC33 (++?) CC34 (++?) R10 (++?) R11 (++?)	R31	None
Significant negative effects identified			
None	None	None	None

- 5.13 All **housing sites** performed well against this objective, with only positive effects predicted. Sites allocated for housing were considered likely to have minor positive effects in relation to this objective if they were within walking distance (600m) of services and facilities, open space, employment, health and education opportunities and/or public transport options and strategic cycle routes. It was assumed that close proximity may encourage journeys on foot and reduce the need for people to travel long distances by car and thus reduce the effect of traffic on the environment. Where sites were not within walking distance of these services and facilities, but were within 300m of a bus stop, rail station, park and ride, strategic cycle route it was assumed there would be potential for new residents to access services and facilities, education, employment and open space using sustainable transport modes, which again helps to reduce the effect of traffic on the environment.
- 5.14 Further minor positive effects were noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site.
- 5.15 Nine of the 40 housing sites were considered to have a significant positive or significant positive/uncertain effect on SA objective ENV1 – reducing the effect of traffic on the environment, as shown in **Table 5.5**. All these housing sites were in close proximity to the majority of the services, facilities, sustainable transport options and cycle routes (listed in the SA framework

assumptions, see **Appendix 5**). In addition, for all of these nine sites excluding one (site R41) the policy or supporting text to the policy specified that a 'car-free' development or a development with reduced parking provision would be considered. Four of these sites (CC14, CC18, CC35 and R9) are also currently used for car parking and it was considered that development for housing (in combination with either 'car-free' or with limited parking) could also have significant positive effects on reducing traffic and congestion in the area. However, for some of these sites the intention to develop a car-free or reduced parking development is only stated in the supporting text to the policy and is not explicitly stated in the policy itself. Where this is the case, significant positive but uncertain effects have been recorded, to reflect the fact that intentions only included in the supporting text to a policy may not necessarily be as stringently applied to planning applications.

- 5.16 Site R41 in particular was considered to have significant positive effects as it seeks to create an exemplar scheme, providing a high quality sustainable development, which would include the provision of new bus routes and connections to the existing strategic cycle network.
- 5.17 All **mixed use sites** performed well against SA objective ENV1. As with housing sites, mixed use sites within walking distance (600 m) of key services and facilities, retail, education and Employment Areas, public transport and open spaces were considered to have minor positive effects as this close proximity could encourage prospective residents, employees or visitors to the site to make more journeys on foot or by bicycle and public transport. Positive effects were also noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site.
- 5.18 17 of the 36 mixed use sites (all City Centre site allocations except two sites) were considered to have a significant positive or significant positive/uncertain effect on SA objective ENV1 – reducing the effect of traffic on the environment, as shown in **Table 5.5**. All of these 17 mixed use sites were in close proximity to the majority of the services, facilities, sustainable transport options and cycle routes etc. In addition, for 12 of these sites the policy or supporting text to the policy specified that a 'car-free' development or a development with reduced parking provision would be suitable. Four of these sites (CC2, CC31, CC34 and CC26) are also used for car parking and it was considered redevelopment for mixed use (in some cases in combination with either 'car-free' or with limited parking) could also have significant effects on reducing traffic and congestion in the area. However, for some of these sites the intention to develop a 'car-free' or reduced parking development is only stated in the supporting text to the policy and is not explicitly stated in the policy itself. Where this is the case, significant positive but uncertain effects have been recorded to reflect the fact that intentions only set out in the supporting text to a policy will not necessarily occur if the site is developed.
- 5.19 Site R10 in particular was considered to have significant positive but uncertain effects. The development will provide for sustainable accessibility and permeability through the site which includes the provision of a new bus route and an extension to the 'purple' cycle route which could significantly increase the proportion of journeys using modes other than the car. Uncertainty exists as site R10 is one of three adjoining and closely related sites which need to be carefully coordinated to overcome significant existing constraints including sustainable access.
- 5.20 All **employment sites** also performed well against this objective. Employment sites within walking distance of public transport or a green link, cycle route etc. were considered to have minor positive effects on this objective as this close proximity may encourage more journeys to work on foot or by bicycle and public transport. Further minor positive effects were noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site.
- 5.21 Only one of the six employment sites was considered to have a significant positive effect on SA objective ENV1 – reducing the effect of traffic on the environment, site R31
- 5.22 Site R31 covers the development of two sites (Site A and B), which are both located on Hurricane Way. Site R31 is the only employment site considered likely to have a significant positive effect, as the proposed development seeks to deliver a north-south pedestrian and cycle link and a bus link from Hurricane Way to Heyford Road, both via site B. This is considered likely to have significant positive effects on reducing traffic congestion and could increase the proportion of journeys using modes other than the car.

- 5.23 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites (i.e. generally positive due to proximity to the factors described above), although no significant positive effects were found for any of the reasonable alternative sites.
- 5.24 It is considered that if all sites are developed there could be some adverse **cumulative effects** on SA objective ENV1 – To reduce the effect of traffic on the environment as cumulatively development is likely to lead to increased traffic and congestion. However, the scale of development to be delivered in Norwich was determined by the JCS. It can be seen that many of the site policies in the Site Allocations DPD seek to reduce the need to use a car and promote sustainable travel. Development Management Policy DM28 should also help to ensure that development reduces the overall need to travel and encourage sustainable travel. Therefore, the cumulative effect of the Site Allocations DPD in conjunction with the Development Management Policies DPD in seeking to reduce the effect of traffic on the environment from the development proposed in the JCS is likely to be positive.
- 5.25 **Site Policy Recommendations:** It is recommended that the intention to develop car free developments is stated in the policy itself. This would strengthen the likelihood of car free development occurring. It is noted however, that Development Management Policy DM32 sets out criteria for residential development that must be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur.

ENV2 - To improve the quality of the water environment

- 5.26 **Table 5.6** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV2, and highlights that no significant positive or significant negative effects were predicted from the development of any site in relation to improving the quality of the water environment.

Table 5.6 Summary of significant effects for SA objective ENV2 – To improve the quality of the water environment

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	None	None	None
Significant negative effects identified			
None	None	None	None

- 5.27 It was considered all **housing, mixed use and employment** sites in close proximity to a river or significant water body and/or within 250m of a riverine or estuarine Site of Special Scientific Interest (SSSI) Special Area of Conservation (SAC), Local Nature Reserve or County Wildlife Site (CWS) could have a minor adverse effect on the quality of water during construction, and potentially through occupancy and operation of the site. This was considered uncertain in many cases as appropriate mitigation (e.g. construction controls to avoid water pollution, abstraction and discharge consents, etc.) may avoid adverse effects. Policies in the Development Management Policies DPD should help to ensure that development takes place in such a way as to avoid water pollution. For example, Policy DM1 seeks to protect and enhance the physical and environmental assets of the city, Policies DM3 and DM5 require all new development to promote and facilitate sustainable drainage measures, which would help to reduce runoff. Approximately 18 of 82 allocated sites were considered to have minor adverse but uncertain effects on this objective.
- 5.28 Sites were considered likely to have minor positive effects in relation to this objective if the site policy, or supporting text to the policy, indicated that through development there would be

opportunities to clean up existing contaminated land as this could have a positive effect on improving the water environment. However, only three sites were considered to have a minor positive effect on this objective.

- 5.29 16 sites were considered to have mixed effects on this objective as they were in close proximity to a SSSI, SAC, LNR, CWS or a river, although the site policy or supporting text to the policy indicated that through development there would be opportunities to clean up existing contaminated land or prevent water pollution.
- 5.30 Sites were considered to have no effect on this objective if they were not located within 250m of a water based SSSI, SAC, LNR, CWS or within the vicinity of a river or significant water body. 34 preferred sites were considered to have no effect on this objective.
- 5.31 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites.
- 5.32 Without mitigation, it is considered the **cumulative effects** on SA objective ENV2 - To improve the quality of the water environment could be mixed positive/adverse. Many of the sites propose to clean up contamination which cumulatively could have a positive effect on water quality. Conversely many of the sites are located close to the River Wensum and the River Yare which could have cumulative adverse effects on the quality of water during construction, and potentially through occupancy and operation of the site. However, the potential adverse effects could be mitigated through policies in the Development Management Policies DPD which should help to ensure that development takes place in such a way as to avoid water pollution. For example, Policy DM1 seeks to protect and enhance the physical and environmental assets of the city and Policies DM3 and DM5 require all new development to promote and facilitate sustainable drainage measures, which would help to reduce runoff.

ENV3 - To improve environmental amenity including air quality

- 5.33 **Table 5.7** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV3, and highlights that no significant positive or significant negative effects were predicted from the development of any site in relation to improving environmental amenity including air quality.
- 5.34 It was considered that all **housing, mixed use and employment** sites located within (or adjacent to) an Air Quality Hotspot or within 250m of an enclosed waste management facility could have a minor adverse effect on this objective as residents, employees or visitors to the site may experience some reduced air quality due to emissions from traffic, and/or odours and dust from the waste facility.

Table 5.7 Summary of significant effects for SA objective ENV3 – To improve environmental amenity including air quality

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	None	None	None
Significant negative effects identified			
None	None	None	None

- 5.35 No sites were located within an Air Quality Hotspot and the majority of sites were located more than 250m for a waste management facility. The majority of sites were therefore considered unlikely to have an effect on this objective (see **Tables 5.1 to 5.4**).
- 5.36 It was considered **mixed use sites** R33 and R39 could have minor adverse, uncertain effects on this objective as the sites are located within close proximity of the Waste Transfer Station and Household Recycling Centre at Swanton Road. There may be some adverse effects arising from the proximity of the developments to this facility, such as reduced air quality due to emissions

from traffic, odours and dust. Uncertainty exists however, as appropriate mitigation could avoid or minimise negative effects. For example, the supporting text for site R39 states that residential development should be located on the northern part of the site to ensure that new residential occupiers are not adversely affected by noise and odour generated by the recycling centre. However, uncertainty exists as intentions only included in the supporting text to a policy may not necessarily be as stringently applied to planning applications and the mitigation may not necessarily be achieved. Development Management Policy DM2 should help to ensure that development will only be permitted where it provides for a high standard of amenity and satisfactory living and working conditions.

- 5.37 It was considered that all **housing, mixed use and employment** sites could have minor positive but uncertain effects if the policy or supporting text to the policy specified that a 'car-free' development or a development with reduced parking provision would be viable as this could help to reduce the amount of journeys made by car. It was also considered that if a site which is currently used for car parking is redeveloped without car parking available on the site, then this could have minor positive effects on reducing emissions and improving air quality. Development Management Policy DM32 sets out criteria for residential development that must be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur. However, for some of these sites the intention to develop a 'car-free' or reduced parking development is only stated in the supporting text to the policy and is not explicitly stated in the policy itself. Where this is the case, minor positive but uncertain effects have been recorded to reflect the fact that intentions only set out in the supporting text to a policy will not necessarily occur as the site is developed. 25 preferred sites were considered to have minor positive but uncertain effects on this objective.
- 5.38 It was considered that **employment** site R32 and **mixed use** site R10 would have uncertain effects at this stage. Neither site is located within an Air Quality hotspot or within 250m of a Waste Management Facility. However, site R32 is allocated for airport operational uses for the further development of Norwich Airport. Further development of the airport could have adverse effects on this objective although it is not clear if the specific development of this site alone will directly impact air quality. Site R10 lies within close proximity to an aggregate depot, the Britvic factory and a sewage treatment works. Collectively these uses could potentially have an adverse effect on this objective in the form of dust and emissions. However, this is recognised in the site policy and with appropriate mitigation measures these effects could be mitigated so an uncertain effect has been assumed at this stage. Development Management Policy DM2 should help to ensure that development will only be permitted where it provides for a high standard of amenity and satisfactory living and working conditions.
- 5.39 All **alternative sites** except one were considered unlikely to have an effect on this objective. One site (M003) was considered likely to have a minor adverse, uncertain effect against this objective because the site is located adjacent to an Air Quality Hotspot.
- 5.40 It is considered that if all sites are developed there could be some adverse **cumulative effects** on SA objective ENV3 – To improve environmental amenity including air quality, as cumulatively development is likely to lead to an increase in emissions to air from construction and potentially from increased car use associated with the operation of the developments. However, many of the site policies seek to reduce car use and promote sustainable travel. Development Management Policy DM28 should also help to ensure that development reduces the overall need to travel and encourage sustainable travel which could help to reduce the potential for adverse cumulative effects on air quality.
- 5.41 **Site Policy Recommendations:** It is recommended that the intention to develop car free developments is stated in the policy itself. This would strengthen the likelihood of car free development occurring and reduce adverse effects on air quality. It is noted however, that Development Management Policy DM32 sets out criteria for residential development that must be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur.

ENV4 - To maintain and enhance biodiversity and geodiversity

- 5.42 **Table 5.8** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV4, and highlights that no significant positive or negative effects

were predicted from the development of any site in relation to maintaining and enhancing biodiversity and geodiversity.

Table 5.8 Summary of significant effects for SA objective ENV4 – To maintain and enhance biodiversity and geodiversity

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	None	None	None
Significant negative effects identified			
None	None	None	None

- 5.43 It was considered that all **housing, mixed use and employment** sites located within 250m of a Site of Special Scientific Interest (SSSI) Special Area of Conservation (SAC), Local Nature Reserve (LNR), County Wildlife Site (CWS) a Roadside Nature Reserve (RNR) or a woodland (see **Appendix 5** SA Framework assumptions) have the potential to have a minor adverse effect on the biodiversity or geodiversity of those sites. It was considered that minor adverse effects could occur through habitat damage/loss of habitat connections, impacts on species via disturbance or increased recreation pressure associated with new residents or employees in proximity to these sites. A degree of uncertainty was included in the scoring as it is not certain that negative effects on biodiversity will be experienced based on proximity alone and could be avoided through appropriate mitigation, such as the inclusion of alternative open space for recreation within the development and management of the biodiversity site. In the appraisal, it was assumed that new open space could relieve recreational pressure on nearby designated sites and may also offer opportunities to promote habitat connections and other benefits for biodiversity. Sites which include open space and/or actively promote the creation, enhancement or maintenance of features important for biodiversity (such as tree planting or the incorporation of green roofs or walls) were therefore considered to have a minor positive effect on this objective. Some uncertainty was also included in the scoring where the intention to develop green space or create, enhance or maintain features important for biodiversity were only stated in the supporting text to the policy and not explicitly in the policy itself.
- 5.44 Policies in the NPPF and the Development Management Policies DPD should help to ensure that development takes place in such a way as to avoid adverse effects on the natural environment. For example, Policy DM6 states that development will be expected to take all reasonable opportunities to avoid harm to and protect and enhance the natural environment of Norwich, including both sites and species. Policy DM7 and Policy DM8 affords protection to trees and open space respectively, which could help to maintain and enhance biodiversity. JCS Policy 1 also seeks to protect environmental assets and states that development should provide for sufficient and appropriate local green infrastructure to minimise visitor pressures.
- 5.45 None of the **housing, mixed use and employment** sites were considered to have a significant positive or significant negative effect on this objective. The majority of sites scored a mixed minor positive/negative or mixed minor positive /negative/ uncertain effect against this objective. Five sites had a minor positive or positive/ uncertain effect and seven sites had a minor adverse uncertain effect.
- 5.46 Sites which were located more than 250m from a SSSI, SAC, LNR, CWS, RNR and woodland and were unlikely to positively or negatively affect biodiversity in any other way were considered not to have an effect on this objective. No effect was recorded against this objective for 21 of the 82 allocated sites.
- 5.47 The 17 **reasonable alternative** sites also scored similarly for this objective as the allocated sites, although identification of positive effects was limited because site policies and intentions for the reasonable alternative sites were not available .

- 5.48 It is considered that if all sites are developed there could be some mixed positive/negative **cumulative effects** on SA objective ENV4 – To maintain and enhance biodiversity and geodiversity. Many of the allocated sites are located within close proximity to a SSSI, SAC, LNR, CWS, RNR or a woodland which cumulatively could result in adverse effects through disturbance and increased visitor pressure to these sites. It is noted that Development Management Policy DM6 states that development will be expected to take all reasonable opportunities to avoid harm to and protect and enhance the natural environment of Norwich, including both sites and species. However, a number of sites are located on greenfield land and cumulatively this could lead to a negative effect on this objective through potential loss of habitats. Many of the sites include provision for new open space which could divert or relieve recreational pressure on nearby designated sites and may also offer opportunities to promote habitat connections and other benefits for biodiversity. Some sites also promote the enhancement or maintenance of features important for biodiversity (such as tree planting or the incorporation of green roofs or walls) which cumulatively could have positive effects on this objective.
- 5.49 **Site Policy Recommendations:** In order to strengthen the likelihood of positive effects on biodiversity, we recommend that where intentions to maintain, protect or enhance biodiversity is stated in the supporting text to a site policy, the policy itself is expanded to also set out these requirements. In particular, it is recommended that site Policy CC1 is expanded to make reference to retaining and enhancing the wooded ridge which is located on part of the site and forms part of wooded ridge on Richmond Hill. It is considered that all policies for development of sites on greenfield land should be amended to include measures to avoid reduce or compensate for the loss of biodiversity.

ENV5 - To maintain and enhance the quality of landscapes, townscapes and the historic environment

- 5.50 **Table 5.9** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV5. A number of sites were considered to have significant positive effects in relation to maintaining and enhancing landscapes, townscapes and the historic environment. Only one preferred site was considered to have a significant negative effect against this objective. Three reasonable alternative sites were considered to have a significant negative effect.

Table 5.9 Summary of significant effects for SA objective ENV5 – To maintain and enhance the quality of landscapes, townscapes and the historic environment

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
CC20	CC1	None.	M008
CC21	CC2		
CC22	CC4		
R29	CC7		
R34	CC8		
R35	CC11		
R38	CC19a		
	CC29		
	CC31		
	CC32		
	CC33		
	R10		

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
	R11 R33		
Significant negative effects identified (uncertainty shown by symbol --/?)			
R45 (--/?)	None.	None.	M001 M002 M009 (--/?)

- 5.51 Norwich is characterised largely by its historic townscape and its green setting. The city has a unique character and heritage, with a wealth of scheduled ancient monuments, listed buildings and other architecturally distinctive structures. The effects of **housing, mixed use and employment** sites on landscape, townscape and the historic environment were based on a number of factors including distance from heritage designations, the current site use, the type and scale of development proposed and local knowledge.
- 5.52 It was considered that some sites within 250m of a national or local heritage designation (including Historic Park and Gardens, Scheduled Ancient Monuments, Listed Buildings, Conservations Areas, Areas of Main Archaeological Interest, the Broads and Heritage Gateways (listed in the SA framework assumptions, see **Appendix 4**)) have the potential to have a negative effect on those assets and their character and setting. Conversely, it was considered that sites with appropriate or innovative design or development that will replace a building or vacant site that currently detracts from the setting of a historic asset would avoid adverse effects and/or result in beneficial effects. Uncertainty was noted where it was not clear from the site policy if appropriate design would be applied to the development or where good design intentions were only included in the supporting text to a policy as they may not necessarily be as stringently applied to planning applications and mitigation may not necessarily be achieved. Development Management Policy DM9 and JCS Policy 2, coupled with policies in the NPPF, should help to ensure development takes place in such a way as to avoid adverse effects on the historic environment and heritage assets.
- 5.53 The majority of **housing** sites performed well against this objective, with seven sites having significant positive effects on landscape, townscape and the historic environment. Site CC20, CC21, CC22 are within a Conservation Area and are close to listed and locally listed buildings. Site CC20 and CC21 are both currently in industrial use and are considered to have 'negative' buildings which detract from the townscape and character of the area. Redevelopment of these sites for housing at the scale envisaged could significantly improve the local townscape the sites will also help to restore the historic frontage to Oak Street, Sussex Street and Chatham Street and contribute to the redevelopment of the street for residential uses. Site CC21 will also improve the setting of the 15th century grade II listed Great Hall.
- 5.54 A significant positive effect has also been given to sites R34, R38, R39 and R45 as it was considered that redevelopment has the potential to significantly improve the local townscape.
- 5.55 Only one housing site (R45) is considered to have a significant negative but uncertain effect on landscape, townscape and the historic environment. The site is part greenfield and part brownfield and is located within 250 metres of Eaton Church and Conservation Area. It is located on the slopes of the Yare Valley, which is identified in the JCS as a green corridor and plays an important role in defining the southern edge of the built up area of the city, providing a landscape buffer. Whilst the policy requires development to be designed to minimise its setting on the Yare Valley and protect neighbouring environmental assets, there is the potential for any form of further development in this sensitive location to significantly reduce the value of the landscape buffer around the southern edge of the city and have a negative effect on views of the city from the south. Development Management Policy DM9 and JCS Policy 2 may help to mitigate against some adverse effects on the historic environment and heritage assets associated with the development

of this site although due to the nature of the impacts it is uncertain whether all adverse effects can be mitigated.

- 5.56 The majority of **mixed use** sites had a positive effect on SA Objective ENV5 – To maintain and enhance the quality of landscapes, townscapes and the historic environment. 14 mixed use sites were considered to have a significant positive effect and no sites had a significant negative effect as shown in **Table 5.9**. The majority of these sites are located within close proximity to one or more heritage designation (listed in the SA framework assumptions, see **Appendix 5**) but it was considered that these sites would have significant positive effects through development with appropriate or innovative design and/or through replacement of a building or vacant site that currently detracts from local townscape or the setting of a historic asset.
- 5.57 Sites R33, CC8 and CC7 in particular are considered to have a significant positive effect on this objective. Site CC8 consists of unoccupied 'at risk' listed buildings, Site CC7 is a former brewery site which includes Howard House, being a listed building in a poor state of repair, and site R33 contains the redundant part of the water treatment works and includes a number of buildings proposed to be locally listed. It is considered that redevelopment will help to restore the listed buildings on site CC7 and CC8 and require the reuse of the buildings proposed for local listing on site R33.
- 5.58 All the **employment** sites apart from one (R32) are considered to have a minor positive effect on SA Objective ENV5. Site R32 is considered to have no effect. The site is located more than 250m from any Historic Park and Garden, Scheduled Ancient Monuments, Listed Building, Conservation Areas, Area of Main Archaeological Interest, the Broads or a Heritage Gateways. Employment development on this empty site neighbouring the airport is therefore unlikely to have an effect on any heritage assets.
- 5.59 Generally the **alternative** sites scored similarly to the preferred sites although significant negative effects were identified for three of the alternative sites (M001, M002 and M009). A significant negative score was given to site M001 and M002 as the sites are currently in use as green space (site M001 also contains tennis courts) and both sites are located in a highly sensitive location within the cathedral close. The sites are also in close proximity to the cathedral, a number of listed buildings and Scheduled Ancient Monuments. Both sites currently provide valuable short and long views to the cathedral from within the cathedral close and from neighbouring high points. These views are considered to be particularly important and sensitive and if the sites were developed these views would be lost. Development Management Policy DM9 and JCS Policy 2 may help to mitigate against some adverse effects on the historic environment and heritage assets associated with the development of these sites although due to the nature of the impacts it is unlikely that all adverse effects can be mitigated.
- 5.60 Site M009, a mixed use alternative site (which is the same site as preferred site R45 allocated for housing), is considered to have a significant negative but uncertain effect on landscape, townscape and the historic environment. As set out above, the site is part greenfield and part brownfield and is located within 250 metres of Eaton Church and Conservation Area. It is located on the slopes of the Yare Valley, which is identified in the JCS as a green corridor and plays an important role in defining the southern edge of the built up area of the city, providing a landscape buffer. Whilst the policy requires development to be designed to minimise its setting on the Yare Valley and protect neighbouring environmental assets, there is the potential for any form of further development in this sensitive location to significantly reduce the value of the landscape buffer around the southern edge of the city and have a negative effect on views of the city from the south. Development Management Policy DM9 and JCS Policy 2 may help to mitigate against some adverse effects on the historic environment and heritage assets associated with the development of this site although due to the nature of the impacts it is uncertain whether all adverse effects can be mitigated.
- 5.61 One alternative site (M008) was considered to have a significant positive effect on landscapes, townscapes and the historic environment. A significant positive score is given as Norfolk Tower (which currently occupies the site) has been identified as a negative building in the City Centre Conservation Area Appraisal.
- 5.62 Approximately 19 of the allocated sites are located within close proximity to the Broads National Park boundary. It is considered that there could be some effects (both positive and negative) on the landscape or townscape setting of the Park from this close proximity. Development

Management Policy DM6 may help to mitigate against adverse effects as it states that development will be expected to take all reasonable opportunities to avoid harm to and protect and enhance the natural environment of Norwich and its setting. The NPPF also provides additional protection for areas of National Park status.

- 5.63 It is considered that if all sites are developed there could be significant positive **cumulative effects** on SA objective ENV5– To maintain and enhance the quality of landscapes, townscapes and the historic environment. Overall development will remove a number of 'negative' buildings, improve local townscapes and historic frontages and restore a number of listed buildings. Some negative cumulative effects could occur from the development of some sites but this is likely to be outweighed by the positive benefits on townscape and the historic environment associated with development of the majority of sites.
- 5.64 **Site Policy Recommendations:** a number of site specific recommendations have been made in relation to this objective:
- CC12 – It is recommended that text is added to this policy to refer to the need to respect the setting of neighbouring listed and locally listed buildings.
 - CC5 – It is recommended that text is added to this policy to refer to the need to respect the setting of on site listed buildings.
 - CC24 –It is recommend that text is added to this policy to refer to the need to respect the setting of nearby listed and locally listed buildings and the City Wall.
 - CC34 - It is recommended that text is added to this policy to refer to the need to respect the setting of nearby locally listed buildings and the line of the City Wall.
 - R3 - It is recommended that text is added to this policy to refer to the need for the development not to be dominated by car parking.
 - R13 – It is recommended that text is added to this policy to refer to the need to create a street frontage to Aylsham Road.
 - R24 We recommend adding text to this policy to refer to the need to create a street frontage to Aylsham Road.
- 5.65 It is also recommended that where sites are within close proximity to the Broads National Park relevant site policies or the supporting text to the policy should make reference is made to the need to protect its setting.

ENV6 - To adapt to and mitigate against the impacts of climate change

- 5.66 **Table 5.10** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV6. All sites performed well against this objective with some significant positive effects predicted, but no significant negative effects likely to occur from the development of any site. Note that flood risk, which could be increased as a result of climate change, is addressed under ENV7.

Table 5.10 Summary of significant effects for SA objective ENV6 – To adapt to and mitigate against the impacts of climate change

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++/?)			
CC13 (++/?) CC14 (++/?) CC15 (++/?) CC18 (++/?) CC35 R9 (++/?) R17 (++/?) R18 (++/?)	CC2 (++/?) CC4 (++/?) CC5 (++/?) CC7 (++/?) CC8 (++/?) CC17 CC24 (++/?) CC25	R31 R42 (++/?)	None

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
R41 R44 (++)	CC26 CC27 (++) CC28 (++) CC29 (++) CC31 (++) CC33 (++) CC34 (++) R43 (++) R10 (++) R11 (++)		
Significant negative effects identified			
None	None	None	None

- 5.67 For objective ENV6 – to adapt and mitigate the impacts of climate change, **housing, employment and mixed use** sites were appraised against the same criteria as ENV1 – reducing the effect of traffic on the environment. However, the emphasise of the appraisal of sites against this criteria was on the reduction of greenhouse gas emissions associated with road traffic. The appraisal of sites against this objective also took into account effects of renewable or low carbon energy development where it was proposed as part of an allocation.
- 5.68 Generally, all **housing sites** performed well against this objective. Sites allocated for housing were considered likely to have minor positive effects in relation to this objective if they were within walking distance (600m) of services and facilities, open space, employment, health and education opportunities and/or public transport options and strategic cycle routes. It was assumed that close proximity may encourage journeys on foot and reduce the need for people to travel long distances, potentially reducing car travel and greenhouse gas emissions. Where sites were not within walking distance of these services and facilities, but were within 300m of a bus stop, rail station, park and ride, strategic cycle route it was assumed there would be potential for new residents to access services and facilities, education, employment and open space using sustainable transport modes, which again helps to reduce traffic and emissions.
- 5.69 Further minor positive effects were noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site. Significant positive effects were given if the development included provision for renewable energy use or significant energy efficiency measures.
- 5.70 10 of the 40 housing sites were considered to have a significant positive or significant positive/uncertain effect on SA objective ENV6 – To adapt to and mitigate against the impacts of climate change as shown in Table 5.10. All these housing sites were in close proximity to the majority of the services, facilities, sustainable transport options and cycle routes (listed in the SA framework assumptions, see **Appendix 5**). In addition, for eight of these ten sites (excluding sites R41 & R44) the policy or supporting text to the policy specified that a 'car-free' development or a development with reduced parking provision would be considered. Four of these sites (CC14, CC18, CC35 and R9) are also currently used for car parking and it was considered that development for housing (in combination with either 'car-free' status or with limited parking) could also have significant positive effects on potentially reducing car travel and greenhouse gas emissions. However, for some of these sites the intention to develop a car-free or reduced parking development is only stated in the supporting text to the policy and is not explicitly stated in the policy itself. Where this is the case, significant positive but uncertain effects have been recorded, to reflect the fact that intentions only included in the supporting text to a policy may not necessarily be as stringently applied to planning applications.
- 5.71 Site R41 was considered to have a significant positive effect as it seeks to create an exemplar scheme, providing a high quality sustainable and energy efficient development, which would include the provision of new bus routes and connections to the existing strategic cycle network.

- 5.72 Site R44 was also considered to have significant positive but uncertain effects because the policy states that the development will be linked to the university district heating network, which has the potential to reduce carbon emissions from the site. However, there is some uncertainty as although linking to the district heating network should reduce carbon emission, it is not clear from the policy if the district heating system uses renewable technology or low carbon sources.
- 5.73 All **mixed use sites** performed well against SA objective ENV6. As with housing sites, mixed use sites within walking distance (600 m) of key services and facilities, retail, education and Employment Areas, public transport and open spaces were considered to have minor positive effects as this close proximity could encourage prospective residents, employees or visitors to the site to make more journeys on foot or by bicycle and public transport. Positive effects were also noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site. Significant positive effects were given if the development included provision for renewable energy use or significant energy efficiency measures.
- 5.74 18 of the 36 mixed use sites were considered to have a significant positive or significant positive/uncertain effect on SA objective ENV6 – To adapt to and mitigate against the impacts of climate change as shown in **Table 5.10**. All of these 18 mixed use sites were in close proximity to the majority of the services, facilities, sustainable transport options and cycle routes etc. In addition, for 12 of these sites the policy or supporting text to the policy specified that a 'car-free' development or a development with reduced parking provision would be suitable. Four of these sites (CC2, CC31, CC34 and CC26) are also used for car parking and it was considered redevelopment for mixed use (in some cases in combination with either 'car-free' or with limited parking) could also have significant effects on potentially reducing car travel and greenhouse gas emissions. However, for some of these sites the intention to develop a 'car-free' or reduced parking development is only stated in the supporting text to the policy and is not explicitly stated in the policy itself. Where this is the case, significant positive but uncertain effects have been recorded to reflect the fact that intentions only set out in the supporting text to a policy will not necessarily occur if the site is developed.
- 5.75 Site R43 was considered to have significant positive but uncertain effects because the policy states that the development will be linked to the university district heating network, which has the potential to reduce carbon emissions from the site. However, there is some uncertainty as it is not clear from the policy if the district heating system uses renewable technology. In addition, sites R10 and R11 were considered to have a significant positive effect on this objective. Both sites seek to maximise the use of renewable/low carbon energy in the form of the provision of district wide heating or CHP and provide high standards of energy efficiency. In addition, site R11 includes development of a power regeneration element from a renewable source. Site R11 is also being considered as a car-free development.
- 5.76 All **employment sites** also performed well against this objective. Employment sites within walking distance of public transport or a green link, cycle route etc. were considered to have minor positive effects on this objective as this close proximity may encourage more journeys to work on foot or by bicycle and public transport, potentially reducing car travel and greenhouse gas emissions. Further positive effects were also noted if development of the site sought to create, maintain or enhance pedestrian and cycle access within or around the site.
- 5.77 Two of the six employment sites were considered to have a significant positive effect on SA objective ENV6, site R31 and R42.
- 5.78 Site R31 covers the development of two sites (Site A and B), which are both located on Hurricane Way. The proposed development at site R31 seeks to deliver a north-south pedestrian and cycle link and a bus link from Hurricane Way to Heyford Road, both via site B. This is considered likely to have significant positive effects on reducing traffic congestion and greenhouse gas emissions and could increase the proportion of journeys using modes other than the car.
- 5.79 Site R42 seeks to create a new Exemplary Low Carbon Building as part of the development. The development will also be linked to the university district heating network, or as an alternative on site facilities will be provided. This has the potential to have significant positive effects on reducing carbon emissions that would otherwise occur. However, there is some uncertainty as it is not clear from the policy if the district heating system uses renewable technology, or whether onsite renewable energy facilities will be considered.

- 5.80 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites (i.e. generally positive due to proximity to the factors described above), although no significant positive effects were found for any of the reasonable alternative sites.
- 5.81 It is considered that if all sites are developed there could be some adverse **cumulative effects** on SA objective ENV6 – To adapt to and mitigate against the impacts of climate change as cumulatively development is likely to lead to an increase in car travel and greenhouse gas emissions. However, the scale of development to be delivered in Norwich was determined by the JCS. Many of the site policies seek to reduce car use, promote sustainable travel and some sites include provision for renewable energy or CHP which could also help to reduce adverse effects. In addition, Development Management Policy DM1 and DM28 should help to ensure that development reduces the overall need to travel and encourage sustainable travel and Policy DM4 promotes renewable energy. Therefore, the cumulative effect of the Site Allocations DPD in conjunction with the Development Management Policies DPD in seeking to reduce greenhouse gas emissions that would otherwise occur from the development proposed in the JCS is likely to be positive.
- 5.82 **Site Policy Recommendations:** It is recommended that the intention to develop car free developments is stated in the policy itself. This would strengthen the likelihood of car free development occurring. It is noted however, that Development Management Policy DM32 sets out criteria for residential development that must be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur.

ENV7 - To avoid, reduce and manage flood risk

- 5.83 **Table 5.11** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV7, and highlights that three of the allocated sites and seven of the reasonable alternative sites are likely to have a significant negative effect on flood risk.

Table 5.11 Summary of significant effects for SA objective ENV7 – To avoid, reduce and manage flood risk

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	None	None	None
Significant negative effects identified (uncertainty shown by symbol --/?)			
CC18 (--/?) R22 (--/?) R46 (--/?)	None	None	M001 (--/?) M002 (--/?) M003 (--/?) M004 (--/?) M009 (--/?) M052 (--/?) H004 (--/?)

- 5.84 Table 2: *Flood risk vulnerability* in the Technical Guidance to the National Planning Policy Framework¹¹ classifies housing and hotels as a 'more vulnerable' use, and buildings used for shops, financial, professional and other services as a 'less vulnerable' use. The guidance states that development of 'more vulnerable' and 'less vulnerable' uses are appropriate in Flood Zone 2

¹¹ Technical Guidance to the National Planning Policy Framework (CLG, March 2012)

(which is defined as having a medium probability of flooding) if they are accompanied by a flood risk assessment. In Flood Zone 3a (high probability of flooding) 'more vulnerable' uses such as housing should only be permitted in this zone if the Exception Test is passed. 'Less vulnerable' uses are appropriate in this zone if accompanied by a flood risk assessment.

- 5.85 A Critical Drainage Area is defined as 'an area within Flood Zone 1 which has critical drainage problems and which has been notified... [to]...the local planning authority by the Environment Agency'. Critical Drainage Areas have been identified through the draft Norwich Surface Water Management Plan. This plan has not yet been adopted, but development proposed in the critical drainage areas have been considered in the same way as sites in fluvial flood risk areas.
- 5.86 The Level 2 Strategic Flood Risk Assessment for Norwich¹² demonstrates that development in Flood Zone 2 is necessary in order to achieve the Joint Core Strategy's housing targets because sufficient sites in Flood Zone 1 are not available. Where part of a site falls within Flood Zone 2 or 3, the need for a flood risk assessment and other suitable mitigation measures have been proposed in the site policy and/or in the supporting text to that policy. This approach is evidence based and supported by the Environment Agency.
- 5.87 **Housing, mixed use and employment sites** located within Flood Zone 2 or 3 and/or a Critical Drainage Area were therefore considered to have the potential for a significant negative effect against this objective, as sites in a medium or high risk Flood Zone or Critical Drainage Area would experience a higher risk to people and property from flooding. However, where mitigation is proposed in the site policy and/or supporting text to the policy (in the form of requiring site-specific flood risk assessments and other mitigation measures including reducing surface runoff through the use of sustainable drainage systems, permeable surfaces etc), it was considered that a significant adverse effect would be reduced to a minor adverse but uncertain effect. Uncertainty exists as it is not clear at this stage whether a flood risk assessment and flood mitigation will be fully effective at reducing risks. This could only be determined at the planning application stage once detailed proposals and accompanying flood risk assessments are prepared.
- 5.88 Positive effects were noted for sites that are not located within Flood Zone 2 or 3 or Critical Drainage area but where the site policy or supporting text to the policy noted that a flood risk assessment would be undertaken, as it was considered that this could nevertheless have positive effects on identifying and reducing flood risk.
- 5.89 **Table 5.12** below sets out the sites located within Flood Zone 2 or 3 and sites within a Critical Drainage Area.

Table 5.12 Sites within Flood Zone 2 or 3 or within a Critical Drainage Area

Sites located within Flood Zone 2	Sites located within Flood Zone 2 & 3	Sites located in Critical Drainage Area.
Housing sites		
CC13	n/a	CC18
CC35		R22
R18		R46
R28		
R29		
R30		
R38		
R41		
R45		

¹² Norwich City Council Strategic Flood Risk Assessment Level 2 Final Report (Hyder, February 2010)

Sites located within Flood Zone 2	Sites located within Flood Zone 2 & 3	Sites located in Critical Drainage Area.
Mixed Use sites		
CC7 CC8 CC9 R11 R39	CC5 CC17 CC19a CC23 R10 R12 R33	n/a
Employment Sites		
CC19b	n/a	n/a
Alternative Sites		
M001 (mixed use) M009 (mixed use) M052 (housing)	M002 (mixed use) M003 (mixed use) M004 (mixed use)	H004 (housing)

- 5.90 A total of nine **housing sites** are located within Flood Zone 2 and three sites are located within a Critical Drainage Area. It was considered that all the sites located within Flood Zone 2 would have a minor adverse, uncertain effects on this objective as the need for a flood risk assessment and other suitable mitigation measures has been proposed in the site policy and/or in the supporting text to that policy. It is considered that the three sites (R22, R46 & CC18) located within a Critical Drainage Area could have a significant adverse but uncertain effect on this objective. These sites would experience a higher risk to people and property from surface water flood risk and no mitigation has been set out in the site policy or the supporting text to these policies to mitigate against this risk. However, development in locations at risk of flooding and within Critical Drainage Areas will be required by Development Management Policies DM3 and DM5 and JCS Policy 1 to undertake a flood risk assessment and mitigate any risks identified which should help to avoid, reduce and manage flood risk at these sites.
- 5.91 A total of 12 **mixed use** sites were located within Flood Zone 2 or 3 and one **employment site** was located in Flood Zone 2. It was also considered all these sites would have minor adverse, uncertain effects on this objective as the need for a flood risk assessment and other suitable mitigation measures have been proposed in the site policy and/or in the supporting text to that policy.
- 5.92 There are three **reasonable alternative** sites located within Flood Zone 2 and three sites located within Flood 2 or 3. One reasonable alternative site is located within a Critical Drainage Area. These sites were all considered to have a significant negative but uncertain effect against this objective as it was considered that sites in a Flood Zone or Critical Drainage Area would experience a higher risk to people and property from flooding and no mitigation has been proposed for these sites. Uncertainty exists because if flood mitigation was applied to these sites, the effects of flooding could be reduced. Development Management Policies DM3 and DM5 and JCS Policy 1 require development in locations at risk of flooding to undertake a flood risk assessment and mitigate any risks identified which should help to avoid, reduce and manage flood risk at these sites.

- 5.93 The remaining 10 reasonable alternative sites were considered to have no effect on this objective as they were not located in a Flood Zone or a Critical Drainage Area. Although these reasonable alternative sites scored better against this objective than some of the preferred sites, NCC have identified a number of wider sustainability issues associated with the reasonable alternative sites that meant these sites were not allocated as preferred sites.
- 5.94 It is considered that if all sites are developed there could be some adverse **cumulative effects** on SA objective ENV7 – To avoid, reduce and manage flood risk. Although the majority of the allocated sites are not located in a flood risk area, 25 sites are located within Flood Zone 2 or 3 or a Critical Drainage Area which cumulatively could have significant adverse effects on this objective. However, it is assumed that for these sites a flood risk assessment will be required and appropriate mitigation put in place to protect people and property in line with Development Management Policies DM3 and DM5 and JCS Policy 1 which should help to reduce adverse cumulative effects and could even result in beneficial effects.
- 5.95 **Site Policy Recommendations:** It is recommended that a commitment to mitigate flood risk at sites located in a Critical Drainage Area is included as a requirement in the relevant site policies.

ENV9 - To make the best use of resources, including land and energy to minimise waste production

- 5.96 **Table 5.13** below summarises the sites where significant positive or negative effects were predicted for SA objective ENV9.

Table 5.13 Summary of significant effects for SA objective ENV9 – To make the best use of resources, including land and energy to minimise waste production

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
R41	R10 R11	R42	None
Significant negative effects identified (uncertainty shown by symbol ++/?)			
R46 R41 R44 (--/+)	R5 (++/?)	R32	HO11 M002

- 5.97 The majority of **housing, employment and mixed use sites** performed well against this objective. Sites were considered likely to have a minor positive effect in relation to this objective if they were located on brownfield land and not located on high quality agricultural land. For this reason, none of the city centre sites were likely to have significant negative effects as none of them include a significant loss of greenfield land. Further minor positive effects were noted if the site policy or the supporting text to the policy noted that a high density development would be sought or the development would include energy efficiency measures, as this would contribute to making the best use of land and resources.
- 5.98 Conversely, negative effects were predicted if sites were located on greenfield land and/or on high quality agricultural land. The significance of these adverse effects was based on the amount of greenfield land that would be lost (for example if the whole site was greenfield it was considered that this would have a significant adverse effect). It was considered that only minor adverse effects would be likely for sites located on high quality agricultural land that are currently occupied by another use, as it was assumed that the high quality agricultural land was already unavailable due to the current use, and the site would not necessarily return to agricultural use in the near future, if the allocation for housing/employment or mixed use was not implemented and

the current use remained. Approximately 18 of 82 allocated sites were considered to have minor adverse but uncertain effects on this objective. Policies in the Development Management Policies DPD should help to ensure there is no unnecessary loss of greenfield land and open space (Policy DM8) and JCS Policy 1 should help to make the most efficient appropriate use of land.

- 5.99 It was considered that two **housing sites** in the remainder of the city (R46 and R44) could have a significant negative effect on SA objective ENV9 - To make the best use of resources, including land and energy to minimise waste production. Both these sites are located wholly on greenfield land. However, it was considered site R44 could also have some minor positive effects on this objective as the policy states that development will be linked to the university district heating network. This could have positive effects on improving the energy efficiency of the development (and reducing the use of non-renewable resources).
- 5.100 One housing site (R41) was considered to have both significant negative and significant positive effects on this objective. The site is located on greenfield, Grade 3 agricultural land and development could therefore have significant adverse effects on this objective (only Grade 3a agricultural land is considered to be best and most versatile land but this level of detail is not available for this site). Conversely, this development is proposed to be an exemplar scheme that will provide a sustainable and energy efficient development, intended to drive up standards of design and place making in similar developments in the future, which is considered could have significant positive effects on this objective.
- 5.101 Two **mixed use** sites (R10 & R11) were considered to have a significant positive effect on this objective. Both sites are on brownfield land so will be a more efficient use of land than development of a greenfield site and neither site is located on high quality agricultural land. Both site policies state that any proposal should maximise the use of renewable/low carbon energy in the form of the provision of district wide heating or CHP and provide high standards of energy efficiency which could have significant positive effects on promoting the use of renewable energy and energy efficiency and minimising energy consumption. In addition site R11, will provide a mix of uses including development of power generation from renewable sources.
- 5.102 One mixed use site (R5) was considered to have a significant negative, but uncertain effect on this objective. The site is located on a grassed playing field and development of this open space could have significant adverse effects on this objective. There is some uncertainty associated with this score because it is not clear how much greenfield land will be lost/retained by the development.
- 5.103 One **employment** site (R32) is considered to have a significant adverse effect on this objective. as an area in the north west of the site is located on Grade 3 agricultural land. The majority of the site is also greenfield land.
- 5.104 One employment site (R42) is likely to have a significant positive effect on this objective. The site is a brownfield site so will be a more efficient use of land than a greenfield site and is not located on high quality agricultural land. The site policy also states that development will include a new Exemplary Low Carbon Building and that development will be linked to the university district heating network or as an alternative, on site facilities will be provided. It is considered this could have significant positive effects on minimising energy consumption and promoting energy efficiency.
- 5.105 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites (generally minor positive). However, two alternative sites (H011 and MOO2) were considered to have a significant negative effect on this objective as both sites are located on greenfield land.
- 5.106 It is considered that if all sites are developed there could be some mixed positive/adverse **cumulative effects** on SA objective ENV9 – To make the best use of resources, including land and energy to minimise waste production. The majority of sites are located on brownfield land so are likely to have a positive cumulative effect on using previously developed land. However, a number of sites are located on greenfield sites and cumulatively development will lead to the loss of some relatively large areas of greenfield land in the city. If all the allocated sites are developed this will also lead to increased energy consumption although it is noted that Development Management Policy DM1 and DM4 seek to reduce energy consumption and promote renewable energy which could help to reduce adverse cumulative effects.

Social objectives

SOC1 - To reduce poverty and social exclusion

- 5.107 **Table 5.14** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC1, and highlights that no significant positive or negative effects were predicted from the development of any site in relation to reducing poverty and social exclusion.

Table 5.14 Summary of significant effects for SA objective SOC1 – To reduce poverty and social exclusion

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
None	None	None	None
Significant negative effects identified			
None	None	None	None

- 5.108 Generally all **housing sites** had minor positive effects against this objective. No site had significant positive or negative effects.
- 5.109 32 of the 40 housing sites were predicted to have a minor positive effect in relation to this objective. Sites were considered likely to have minor positive effects in relation to this objective if they were located within a relatively deprived area (an area defined as being within one of the lower percentiles of indices of multiple deprivation¹³). It was assumed that if a proposed housing site is within an existing deprived area, it may have the potential to contribute to improving that area. It was assumed that only minor positive effects will be likely, to reflect the fact that factors outside the remit of the Site Allocation DPD will influence deprivation, poverty and social exclusion.
- 5.110 Sites were considered to have no effect on this objective if they were located within one of the higher percentiles of the indices of multiples deprivation. No effect was recorded against eight housing sites in this case.
- 5.111 All **mixed use sites** had minor positive effects against this objective. All 36 mixed use sites lie within a relatively deprived area (an area defined as being within one of the lower percentiles of indices of multiple deprivation). A mixed use site has the potential to improve the area through regeneration, but also improve employment opportunities for people who live within a deprived area.
- 5.112 All **employment sites** performed well against this objective and were scored as likely to have a minor positive effect. All of the employment sites are situated within relatively deprived areas. Therefore, it was considered that an employment site has the potential improve an area through regeneration and by providing employment opportunities for people who live within a deprived area.
- 5.113 The **reasonable alternative sites** scored similarly for this objective to the allocated sites. Thirteen of the sites scored a minor positive effect, while four scored no effect due to the factors set out above.
- 5.114 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective SOC1– *To reduce poverty and social exclusion*. Development could help to promote regeneration and reduce poverty and social exclusion through the introduction of new housing, community facilities and employment opportunities.

¹³ Indices of Multiple Deprivation (DCLG, 2010).

SOC2 - To maintain and improve the health of the whole population and promote healthy lifestyles

Table 5.15 Summary of significant effects for SA objective SOC2 – To maintain and improve the health of the whole population and promote healthy lifestyles

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	R5 (++/-)	None	M002 (++/-)
Significant negative effects identified			
None	None	None	None

- 5.115 Generally all **housing, mixed use and employment** sites had a positive effect on this objective. It was considered that sites would have a minor positive effect on this objective if they were located within walking distance (600m) of a hospital or healthcare facility, a publicly accessible open space, a river valley, woodland or riverside walk and within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, as this could encourage people to make more journeys by foot or on bicycle and be active outdoors in open space, thus promoting healthy lifestyles.
- 5.116 Further minor positive effects were noted if development of the site sought to create, maintain or enhance open space or pedestrian and cycle access within or around the site as this could also have positive effects on health. It was considered sites would have a significant positive effect on this objective if they sought to develop a new healthcare facility. Sites were considered to have a minor adverse effect if they resulted in the loss of sports facility or open space used for recreation. Sites were considered to have a significant negative effect if they resulted in the loss of a healthcare facility (no sites were considered to have a significant negative effect on this objective).
- 5.117 It was considered three **housing sites** (R41, R44 and R46) could have mixed effects on this objective. All three sites are within walking distance (600m) of a healthcare facility and publicly accessible open space, a river valley, woodland or riverside walk and within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, which may encourage people to make more journeys by foot or on bicycle and be active outdoors in open space, thus promoting healthy lifestyles. However, all three sites are currently open space sites used for recreation or sport, and loss of these sites could have adverse effects on this objective. It is noted that site R44 does try to mitigate for the loss of existing open space by providing alternative green space for public access as compensation, but it is not clear how accessible these alternative sites will be for nearby residents and users of the existing site.
- 5.118 It is considered one **mixed use site** (R5) could have significant positive and minor negative effects on this objective. The site is within walking distance (600m) of a healthcare facility and publicly accessible open space, a river valley, woodland or riverside walk and within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, which may encourage people to make more journeys by foot or on bicycle, thus promoting healthy lifestyles. In addition, the site is allocated primarily for a family and community support centre which could have significant positive effects on wellbeing for some members of the community. However, this site includes the development of grassed playing fields and tennis courts and although it is noted that there will be extensive remaining school fields providing a wide range of sports pitches and facilities, development of this site will result in the loss of facilities which could have some adverse effects on this objective.
- 5.119 One **employment site** (R42) is likely to have mixed effects on this objective. The site is within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, which may encourage people to make more journeys to work by foot or on bicycle, thus promoting healthy lifestyles. In addition the site policy also states that development will improve

cycle and pedestrian links which could also have positive effects on health. However, the supporting text to this policy states that the former nursery on site is partly in use as a temporary 'wellbeing' project. It is considered that loss of this temporary health use may have some adverse effects on this objective.

- 5.120 One **reasonable alternative** site (M002) is considered to have significant positive and minor negative effects on this objective. The site is within walking distance (600m) of a publicly accessible open space, a river valley, woodland or riverside walk and within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, which may encourage people to make more journeys by foot or on bicycle and be active outdoors in open space, thus promoting healthy lifestyles. The development also seeks to provide housing with commercial or health-related uses. If health-related uses were to come forward at this site, this could have significant positive effects on this objective. However, the site is currently occupied by Norwich School playing fields. The loss of playing fields could have negative effects on this objective.
- 5.121 It is considered one **reasonable alternative site** (H011) is likely to have mixed, uncertain effects on this objective, as it is within walking distance (600m) of a publicly accessible open space, a river valley, woodland or riverside walk and within 300m of a bus stop, rail station, park and ride, strategic cycle route or a Green transport spine, which may encourage people to make more journeys by foot or on bicycle and be active outdoors in open space, thus promoting healthy lifestyles. However, the development would result in the loss of part of Eaton Golf Course. Loss of this sport facility could have a minor negative effect on this objective.
- 5.122 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective SOC2– To maintain and improve the health of the whole population and promote healthy lifestyles providing that adequate healthcare facilities are provided to deal with demand from the increased population (Development Management Policies DM1 and DM22 should help to ensure health is taken into account in development). All the sites are in a location which provides the opportunity to access open space and/or a cycle route, riverside walk, footpath etc which could help to encourage people to be active outdoors in open space, thus promoting healthy lifestyles.

SOC3 - To improve education and skills

- 5.123 **Table 5.16** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC3, and highlights that only four sites were considered likely to have significant positive effects (two allocated sites and two reasonable alternative sites), while no negative effects were predicted from the development of any site in relation to improving education and skills.

Table 5.16 Summary of significant effects for SA objective SOC3 – To improve education and skills

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	R43	R42	MOO1 MOO3
Significant negative effects identified			
None	None	None	None

- 5.124 Generally all **housing sites** performed well against this objective. It was considered that housing sites within 600m of a primary and/or secondary school are likely to have minor positive effects on this objective, but with uncertainty, as the adequacy of the education infrastructure to accommodate the new residents is unknown. If housing sites are not within 600m of a primary and/or secondary school it was considered they are unlikely to have an effect on this objective.

- 5.125 All **mixed use sites** also performed well against this objective. It was assumed that mixed use sites within 600m of a primary and/or secondary school that contained provision for housing are likely to have minor positive effects on this objective, but with uncertainty, as the adequacy of the education infrastructure to accommodate the new residents is unknown. It was also considered that where mixed use sites provided additional employment opportunities for 'key workers' (i.e. public sector employees providing essential services such as health care staff, teachers, police/prison/probation officers, social workers, fire fighters etc.), this could have minor positive effects on this objective as the site may help to retain key workers in the City. If the policy did not mention the specific type of employment use allocated for the site then effects were uncertain, and if the policy specified an employment use that would not employ key workers (for example warehouse or factory) then it was considered unlikely that the site would have an effect on this objective.
- 5.126 One mixed use site (R43) was considered to have a significant positive effect on this objective. Development of this site would include educational uses associated with the University of East Anglia (UEA), which could have some positive effects on improving education and skills and potentially helping to retain key workers in the city. Providing education infrastructure could also have positive effects on existing communities and promoting lifelong learning opportunities.
- 5.127 Generally all **employment sites** had uncertain or minor positive effects on this objective. As with mixed use sites it was considered that sites could have minor positive effects on this objective if they provided employment opportunities for key workers, as this may help to retain key workers in the City. If the site policy did not mention the specific type of employment use allocated for the site then effects were uncertain and if the policy specified an employment use that would not employ key workers (for example warehouse or factory) then it was considered unlikely that the site would have an effect on this objective.
- 5.128 One employment site (R42) was considered to have a significant positive effect on this objective. Development of this site would include educational uses associated with the UEA, which (as with site R43) could have some positive effects on improving education and skills and potentially helping to retain key workers in the city. Providing education infrastructure could also have positive effects on existing communities and promoting lifelong learning opportunities.
- 5.129 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites (i.e. generally minor positive or uncertain effects due to the factors described above). It was considered two reasonable alternative sites could have significant positive effects on this objective. Site M001 and M003 were originally considered for housing and education use and housing with commercial and educational uses respectively. Development of these sites for educational uses could have some significant positive effects on helping to retain key workers in the city, and providing education infrastructure could also have positive effects on existing communities and promoting lifelong learning opportunities.
- 5.130 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective SOC3– To improve education and skills. The majority of development could help to improve education and skills by locating housing and mixed use development in areas with easy access to education facilities (providing there is adequate capacity in local schools). Some sites also provide employment opportunities for 'key workers' which is likely to have a positive cumulative effect on this objective.

SOC 4 – To provide the opportunity to live in a decent, suitable and affordable home

- 5.131 **Table 5.17** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC4, and highlights that two sites had a significant positive effect, while no significant negative effects were predicted from the development of any site in relation to providing the opportunity to live in a decent, suitable and affordable home.

Table 5.17 Summary of significant effects for SA objective SOC4 – To provide the opportunity to live in a decent, suitable and affordable home

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
R41	R10	None	None
Significant negative effects identified			
None	None	None	None

- 5.132 All except one of the **housing sites** scored a minor positive effect on this objective. It was considered that all housing sites, regardless of their location should help to reduce the housing need in the plan area if developed. The specific location of individual sites is unlikely to influence the suitability/affordability of homes developed, but whether or not the housing site is within an existing urban centre or within a housing renewal/regeneration area could have minor positive effects on creating sustainable communities.
- 5.133 Site R41 was considered to have significant positive effects on this objective because this site will offer a significant amount of housing as an urban extension. This includes affordable housing, provision for housing for the elderly, institutional residential and nursing care and other housing for special needs, thus providing a broad spectrum of housing opportunities within a sustainable community.
- 5.134 All of the **mixed use sites** that contained housing had a minor positive effect on this objective (32 out of 36). Three of the mixed use sites did not contain a residential element and were therefore scored as likely to have no effect on this SA objective.
- 5.135 Site R10 was considered to have a significant positive effect on this objective. The housing element of this mixed use site is proposing the development of 600 dwellings. It is considered that this will significantly enhance the opportunity to provide decent, suitable and affordable homes that will appeal to all homeowners and tenants.
- 5.136 **Employment sites** were not assessed against this SA objective as it was considered they are unlikely to have an effect on providing, decent, suitable or affordable homes.
- 5.137 The majority (14 out of 17) of the **reasonable alternative sites** had a minor positive effect on this objective for the same reasons given above. There were two alternative sites that are mixed use but did not include any residential development and one employment site, which were not assessed against this SA objective.
- 5.138 It is considered that if all sites are developed there is likely to be significant positive **cumulative effects** on SA objective SOC4– To provide the opportunity to live in a decent, suitable and affordable home. Development of all the allocated mixed use and housing sites will provide a significant amount of housing, including affordable housing in the City.

SOC5 – To build community identity, improve social welfare and reduce crime and social responsibility

- 5.139 **Table 5.18** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC5, and highlights that eleven sites had significant positive effects, while no significant negative effects were predicted from the development of any site in relation to building community identity, improving social welfare, reducing crime or creating social responsibility.

Table 5.18 Summary of significant effects for SA objective SOC5 – To build community identity, improve social welfare and social responsibility and reduce crime

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
R6	CC7	None	None
R8	CC8		
R28	CC9		
R38	CC32		
R46	CC33		
	R24		
Significant negative effects identified			
None	None	None	None

- 5.140 The effects of **housing, mixed use and employment sites** on this objective were based on the current use of the site, the proposed site uses and local knowledge of the sites and their environs (in particular where crime, fear of crime and antisocial behaviour is known to be an issue).
- 5.141 All **housing sites** were considered to have positive effects on this SA objective. 35 out of the 40 sites were considered to have a minor positive effect on this objective. It was considered that the redevelopment of these sites for housing will increase surveillance and is therefore likely to reduce both actual crime and perceived crime. Sites earmarked solely for residential use could also assist in building a community identity for the area.
- 5.142 The remaining five housing sites were considered to have significant positive effects on this objective. Two of the sites (sites R28 and R38) are disused and redevelopment will increase surveillance on existing unattractive and intimidating pedestrian/cycle routes. Site R6 has suffered from vandalism and it is considered that the redevelopment of this site will improve surveillance of the site and the surrounding area. Site R8 will increase the surveillance of a neighbouring churchyard which has been subject to anti-social behaviour. Site R46 will provide a development that will provide surveillance over a green space which has been subject to misuse. In addition to the potential for removing anti-social behaviour from these areas, the sites are residential developments which could assist in building a positive community identity for the areas concerned.
- 5.143 All of the **mixed used sites** were considered to have positive effects on this objective. 29 of the 36 sites were considered to have a minor positive effect on this objective. The sites were scored the same as the housing sites above as they are providing a mix of uses which will increase surveillance, reduce actual and perceived crime and assist in building a community identity.
- 5.144 One of the mixed use sites was considered to have uncertain minor positive effects on this objective. Site R3 was considered likely to have uncertain minor positive effects as the development involves the provision of a car park to serve the community facility. There is uncertainty as there is a need to ensure that the development is not overly dominated by car parking as this could create a less safe environment. Development Management Policy DM31 should help ensure that development of this site has the appropriate amount of parking which includes at least the minimum and no more than the maximum for this proposed community facility.

- 5.145 Six of the mixed use sites were considered to have significant positive effects on this objective. Sites CC7 and CC33 would redevelop a vacant site and provide a pedestrian/cycle route which will assist in surveillance. Site CC8 would restore a number of listed buildings and provide a riverside walk which will increase the surveillance of the area. Site CC9 will provide a number of uses and a riverside walk which will increase the amount of people moving to and from the site during the day/night increasing the surveillance of the area. Site CC32 is a vacant site on a planned pedestrianised route. Redevelopment of this site will provide the necessary surveillance for a pedestrianised area. Site R24 is a site looking over Pointers Field and it is considered that development will improve the surveillance of Pointers Field. In addition to creating naturally surveyed areas that will reduce actual crime and the fear of crime, the mix of uses will help to create a community identity for the area.
- 5.146 The majority of the **employment sites** (five out of six) were considered to have minor positive effects on this objective. All five of the sites were given this score as a well-designed employment development is likely to reduce actual crime and the fear of crime.
- 5.147 Site CC19b was considered to have no effect on this objective. The site is currently used for employment, and the continued use for employment is not likely to have an effect on crime or fear of crime.
- 5.148 The majority of the **alternative sites** were considered to have minor positive effects on this objective. It is considered that development of these sites would increase surveillance and reduce crime and the fear of crime while assisting in community identity.
- 5.149 Alternative employment site E002 was considered to have no effect on this objective as the site is currently used for employment and redevelopment for employment is not likely to have an effect on crime or fear of crime.
- 5.150 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective SOC5– To build community identity, improve social welfare and social responsibility and reduce crime as the majority of sites will have a positive effect on this objective.

SOC6 – To offer more opportunities for rewarding and satisfying employment for all

- 5.151 **Table 5.19** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC6, and highlights that no significant positive or negative effects were predicted from the development of any site in relation to offering more rewarding and satisfying employment opportunities.

Table 5.19 Summary of significant effects for SA objective SOC6 – To offer more opportunities for rewarding and satisfying employment for all

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	None	None	None
Significant negative effects identified			
None	None	None	None

- 5.152 Generally all **housing sites** had minor positive or mixed effects against this objective. No sites had significant positive or significant negative effects.
- 5.153 26 of the 40 housing sites were predicted to have a minor positive effect in relation to this objective. Sites were considered likely to have minor positive effects if they were within close proximity (600m) to an Employment Area, as this could offer opportunities for easy access to employment. It was considered only minor positive effects will be likely as factors outside the

remit of the Site Allocations DPD will influence employment levels and whether employment is rewarding and satisfying.

- 5.154 Mixed minor positive/negative effects were predicted for 10 of the 40 housing sites. Sites were considered to have mixed effects in relation to this objective if the site was within close proximity (600m) to an Employment Area and if the site to be developed is currently occupied by an employment use. Redevelopment of an employment site for housing would have a minor adverse effect on this objective as it would result in the loss of existing employment opportunities. JCS Policy 5 states that employment land with potential for redevelopment for other uses will be identified in supporting DPDs or SPDs.
- 5.155 No effect was recorded against four housing sites which were not located within close proximity to an Employment Area and did not involve the redevelopment of an existing employment site.
- 5.156 All **mixed use** sites had a minor positive effect against this objective because the employment aspects of the mixed use sites are likely to contribute to providing new employment opportunities and reducing unemployment levels. For mixed use sites which contain a residential element, sites were considered likely to have minor positive effects in relation to this objective if they are within close proximity (600m) to an Employment Area, as this could offer opportunities for easy access to employment for new residents.
- 5.157 All **employment sites** were considered to have a minor positive effect against this objective as they are likely to contribute to providing new employment opportunities and reducing unemployment levels.
- 5.158 The 17 **reasonable alternative** sites also scored similarly for this objective to the allocated sites (i.e. generally minor positive or mixed effects due to the factors described above).
- 5.159 It is considered that if all sites are developed there is likely to be a significant positive **cumulative effects** on SA objective SOC6 - To offer more opportunities for rewarding and satisfying employment for all. The effect of development of all the mixed use and employment sites is likely to be significant on providing new employment opportunities and reducing unemployment levels in the city.

SOC7 – To improve the quality of where people live

- 5.160 **Table 5.20** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC7, and highlights that no sites are predicted to have a significant positive effect, while five sites are considered to have a significant negative effect in relation to improving the quality of where people live.

Table 5.20 Summary of significant effects for SA objective SOC7 – To improve the quality of where people live

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
None.	None.	None	None
Significant negative effects identified			
R41 (--/+) R44 (--/+)	R5 (--/+)	None	H011 (--/+) M002 (--/+)

- 5.161 Just over half of the **housing sites** were scored as likely to have minor positive effects on this objective (22 out of 40). Housing sites were scored as minor positive if the site is within 600m of publicly accessible open space, urban green space and within 600m of a river valley, woodland, or riverside walk. It is assumed that close proximity to these natural and open spaces could contribute to the quality of life of residents in the new development. In addition, if the site is currently disused or vacant then redevelopment could improve the amenity of the area and have

minor positive effects on improving the satisfaction of people within the neighbourhood. Sites which specified that open space within the site or immediately adjacent to the site would be provided or enhanced are also likely to have a minor positive effect on this objective as they are likely to contribute to improving the quality of local open spaces.

- 5.162 Two housing sites (R41 & R44) were considered to have significant negative, but also minor positive effects on this SA objective. Both sites are within 600m of publicly accessible open space, urban green space, a river valley, woodland or riverside walk. However, site R44 is currently a greenfield site, comprising of grassland, two trees and two cycle routes and development will result in a loss of open space, which is likely to have a significant adverse effect on existing residents and users of this site. The site policy does try to mitigate for the loss of existing open space by providing alternative green space for public access as compensation. However, it is not clear how accessible these alternative sites will be for nearby residents and users of this site. Site R41 is an area of open space currently used for informal recreation, loss of which could have some significant negative effects on this objective. However, the development will provide significant areas of recreational and informal open space, playspace and green infrastructure which could have some minor positive effects and minimise adverse effects associated with the loss of the existing open space.
- 5.163 16 of the 40 housing sites were considered to have mixed uncertain effects on this objective. All of these 16 sites are within 600m of publicly accessible open space, urban green space, a river valley, woodland or riverside walk. However, the majority of these sites also lie within close proximity or adjacent to a busy road or railway and noise has been identified as a potential issue at the site which could have negative effects on this objective. The site policy or the supporting text of the policy states that noise attenuation measures will be required to mitigate against potential noise. However, it is uncertain if the measures proposed would fully mitigate adverse noise effects.
- 5.164 17 of the 36 **mixed use sites** were considered to have minor positive effects on this objective. All of these sites are within 600m of the spaces set out above. A number of the site policies supporting text also stated that negative buildings in townscape terms are currently located on the site. Redevelopment of these sites would remove or enhance these buildings, which could have positive effects on improving the satisfaction of people within the area. In addition to this, a number of sites seek to improve or enhance the public realm and open spaces which will also have positive effects on this objective.
- 5.165 One mixed use site (R5) was considered to have significant negative, but also minor positive effects on this SA objective. The site is within 600m of accessible open space and is within 600m of a river valley, woodland or riverside walk which could have some positive effects. However, the site consists of hard court tennis courts and grassed playing field. Development of this open space could have significant adverse effects on this objective which seeks to improve the quality of open space.
- 5.166 17 of the mixed use sites were considered to have mixed uncertain effects on this objective. All of the sites were within 600m of the open spaces set out above. All of these sites are situated near to or adjacent to a use or a road or railway that could give rise to adverse noise levels to residents or users of these sites. Sites CC17 and R39 are also within close proximity to a waste transfer station, which could produce odours that would reduce the quality of life for people using these sites. Site R10 could experience some noise and odour issues relating to industrial uses close to the site.
- 5.167 Three of the six **employment sites** were considered to have minor positive effects on this objective. Site CC19b is currently cleared and is being used as a temporary car park. Development of this site could improve the area and have positive impacts on the satisfaction of people within the area. The supporting text of site policy CC30 states that the redevelopment of this site provides an opportunity to enhance the character of the street and the public realm, which could have some positive effects on the satisfaction of people within the neighbourhood. The supporting text of site R42 states that some of the buildings on site are in a poor state of repair and the former nursery is partly disused. Development of this site has the potential to bring these buildings back to use, which could have positive effects on improving the satisfaction of people within this area.

- 5.168 Site R32 was considered to have a minor adverse but uncertain effect on this objective. Operational airport uses could result in noise impacts on nearby residential properties. The site policy does state that a noise impact assessment will be required to inform the proposals for this site and suitable boundary screening and mitigation measures which respect the living conditions of nearby residents will be included as part of any development proposal for this allocation site which should help to avoid adverse effects. However, it is uncertain if these mitigation measures will fully reduce any adverse effects on nearby residents. Development Management Policy DM2 and DM27 should help to ensure a high amenity level and quality of life for nearby residents. Development will not be permitted if unacceptable noise levels will be generated as a result of the proposals and where necessary development must include mitigation measures to protect neighbouring uses.
- 5.169 Two of the sites (R1 and R31) were considered to have a mixed uncertain effect on this objective. Both sites could be redeveloped to provide an improvement to the area and satisfaction of people within the immediate area. However, the employment uses proposed at site R1 could give rise to some noise effects on nearby residents. The site policy states that noise mitigation measures must be designed into the development to avoid these adverse noise effects. Site R31 is put forward as a light industrial site. The site policy states that proposed uses must not be significantly detrimental to the amenity of residents, while landscape buffers must be implemented to protect existing residents.
- 5.170 The majority of the **reasonable alternative sites** were considered to have minor positive effects on this SA objective.
- 5.171 Two reasonable alternative sites (H011 and M002) were considered to have significant negative and minor positive effects on this objective. Both sites are located within 600m of the spaces set out above which could have some minor positive effects. However, Site H011 is located on urban greenspace and redevelopment of this site would result in the loss of open space. Site M002 comprises the west flank of Norwich School playing fields, this loss of open space could have significant negative effects on this objective.
- 5.172 Two of the 17 reasonable alternative sites (M048 and M056) were considered to have mixed effects on this objective. Both sites are within 600m of the spaces set out above. Site M048 has the potential for introducing a takeaway shop on site. Dependent on the type of takeaway shop, adverse noise and odours could be produced which could reduce the quality of life for existing and new residents. Site M056 is currently partly urban green space, removal of area of open space will reduce the amount of urban open space available to existing and new residents.
- 5.173 Site E002 was considered to have an uncertain effect on this objective, as it is not clear what the site is currently used for and what specific type of employment would be brought forward.
- 5.174 It is considered that if all sites are developed there is likely to be some positive **cumulative effects** on SA objective SOC7 – To improve the quality of where people live, as many of the sites will result in the redevelopment of vacant or unused sites and provide open space or improvements to the public realm. There could also be some cumulative negative effects as some sites will result in the loss of open space or urban greenspace.
- 5.175 **Site Policy Recommendations:** it is considered that where noise has been identified as an issue, the requirement for a noise assessment and appropriate mitigation should be set out in the site policy.

SOC8 – To improve accessibility to essential services, facilities and jobs

- 5.176 **Table 5.21** below summarises the sites where significant positive or negative effects were predicted for SA objective SOC8, and highlights that six preferred sites and two reasonable alternative sites are predicted to have a significant positive effect, while no significant negative effects are predicted for any of the sites in relation to improving accessibility to essential services, facilities and jobs.

Table 5.21 Summary of significant effects for SA objective SOC8 – To improve accessibility to essential services, facilities and jobs

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	CC29 CC31 CC32 CC33	R31 R42	M056 E002
Significant negative effects identified			
None	None	None	None

- 5.177 All of the **housing sites** were considered to have minor positive effects on this objective. The sites were appraised against their proximity to services and facilities, (listed in the SA framework assumptions, see **Appendix 5**). The majority of the sites are within close proximity of at least five of the types of services and facilities assessed. Site R20 recorded the least favourable result in terms of proximity to the services and facilities, being within 600m of only three of these services and facilities. However, R20 and all of the other sites lie within 300m of a sustainable transport option. So although not within walking distance of all of the facilities/services set out above, residents of these sites have the potential to access these facilities/services via public transport, if they did not have access to a private car.
- 5.178 The majority of the **mixed used sites** were considered to have minor positive effects on this objective. Similar to the housing sites, those mixed use sites that scored minor positive are not within 600m of all the facilities and services. However, they all lie within 300m of a sustainable transport option, which would mean that residents of these sites would be able to access these facilities/services via public transport, even if they did not have access to a private car.
- 5.179 Two of the mixed use sites (R10 and R11) were considered to have uncertain positive effects on this objective. The sites currently have poor access to a number of services. The site policies state that this will be substantially improved, however these improvements rely on access being provided from other sites within this DPD. Development Management Policy DM1 requires proposals to reduce dependency on the private car. Furthermore Policy DM28 requires proposed developments to not result in an increase in travel across the city by private car and any anticipated increase in travel demand should be accommodated and diverted to non-car modes, securing sustainable access to essential services, facilities and jobs.
- 5.180 Four of the 36 mixed use sites were considered to have significant positive effects on SA objective SOC8 – to improve accessibility to essential services, facilities and jobs as shown in **Table 5.20**. All four of these sites are within 600m of all the services and facilities defined as being relevant to this SA objective as well as within 300m of a sustainable transport option, meaning that the services are likely to still be accessible even if residents did not have access to a private car. In addition to the above, the site will provide retail (sites CC31 and CC33), retail/hotel (site CC32) and retail/café/art/entertainment (site CC29) which will increase access for the residents and users of the site to services, facilities and jobs.
- 5.181 Four **employment sites** were considered to have minor positive effects on this objective. The sites would bring forward employment uses which could improve accessibility to jobs in the area. Sites CC30, CC19b, R1 and R32 all lie within 600m of a bus stop or rail station and within 300m of a sustainable transport option. This means that employment opportunities are more likely to be accessible by sustainable modes of transport, which could reduce dependency on the private car.
- 5.182 Two of the employment sites (R31 and R42) were considered to have significant positive effects on this objective. Both sites could improve accessibility to jobs in the area and lie within 600m of

a bus stop or rail station and within 300m of a sustainable transport option. The site policy of site R31 will deliver a north-south pedestrian/cycle link as well as a bus link from Hurricane Way to Heyford Road, both via site B. Site R42 is earmarked for education as well as employment opportunities, increasing both education and employment opportunities available. In addition to this, pedestrian/cycle links to the university campus will be improved which include linking to local and strategic cycle routes.

- 5.183 Generally all the **reasonable alternative sites** (15 out of 17) were considered to have minor positive effects on this objective. Similar to the scoring above, the sites are not in proximity to all of the services and facilities defined as being relevant to this SA Objective, however they were within 300m of a sustainable transport option, thus reducing the dependency on the private car for access to essential services/facilities.
- 5.184 Two out of the 17 alternative sites (M056 and E002 (as retail led mixed use) were considered to have significant positive effects on this objective. Both sites are within 600m all the services and facilities defined as being relevant to this SA Objective as well as within 300m of sustainable transport options. Site E002 also proposes to bring forward housing led mixed use which will increase access for residents and users of the site to some services, facilities and potentially jobs.
- 5.185 It is considered that if all sites are developed there is likely to be some positive **cumulative effects** on SA objective SOC8 – To improve accessibility to essential services, facilities and jobs. Development of mixed use and employment sites will increase the number of services, facilities and jobs available to new and existing residents.

Economic Objectives

EC1 – To encourage sustained economic growth

- 5.186 **Table 5.22** summarises below where significant positive or negative effects were predicted for SA objective EC1, and highlights that three sites are predicted to have a significant positive effect, while no significant negative effects are predicted for any of the sites in relation to encouraging sustained economic growth.

Table 5.22 Summary of significant effects for SA objective EC1 – To encourage sustained economic growth

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified			
None	R3 R43	R42	None
Significant negative effects identified			
None	None	None	None

- 5.187 The **housing sites** were split relatively even between having uncertain minor positive effects and uncertain mixed effects on this objective. Sites were assessed against whether they were within a Core Strategy designated centre, a housing renewal/regeneration area or within 600m of an identified retail centre/ employment area. The sites were scored uncertain minor positive (just over half the sites) if the site fell within at least one of the areas set out above. Although residents might live within/in close proximity to one of these areas it is uncertain that they will spend their money in these areas.
- 5.188 The remaining housing sites (16 out of 40) were scored as having uncertain mixed effects on this objective. These sites are within one of the areas set out above, but employment uses currently exist on these sites. The loss of employment sites solely for residential development could have adverse effects on encouraging sustained economic growth.

- 5.189 The majority of the **mixed use sites** were considered to have minor positive effects on this objective. These sites were scored similarly to the uncertain minor positive housing sites. However, as these sites are mixed use and could deliver an employment opportunity, the uncertainty in encouraging sustained economic growth is removed, leaving a minor positive effect.
- 5.190 Two of the mixed use sites were considered to have significant positive effects on this objective. Site R3 is the development of a district centre which will provide everyday shopping needs. Due to its distance from the city centre it is unlikely to adversely affect the vitality or viability of the city centre, providing a new district for people living outside the city centre to shop and find work. Site R43 seeks to create a campus extension for university related uses. The university is a major employer and the supporting text of the site policy states it is fundamental to the economic strategy for the area. The campus extension associated with this site could have significant positive effects on strengthening the economy in Norwich.
- 5.191 The remaining mixed use sites (15 out of 36) were considered to have uncertain mixed effects on this objective. These sites are currently in use as employment. The redevelopment of an employment site for residential and employment uses could dilute the employment opportunities within the area, thus adversely affecting this SA objective.
- 5.192 All of the **employment sites** performed well against this objective. Five out of the six sites were considered to have minor positive effects on this objective. Although none of these sites are within a Core Strategy designated centre, the sites received a minor positive score as the sites will contribute to employment opportunities within Norwich, encouraging sustained economic growth.
- 5.193 Site R42 was considered to have significant positive effects on this objective. Although the site does not lie within a Core Strategy designated centre, the site policy seeks to create an education and employment development. The UEA is a major employer and the proposed mix of employment and education development associated with UEA could have significant positive effects on encouraging sustained economic growth.
- 5.194 The **reasonable alternative** sites had mixed effects on this objective. Eight out of the 17 sites were considered to have a minor positive effect on this objective. These sites would be employment or mixed use based and would provide employment opportunities on site.
- 5.195 Five out of the 17 alternative sites were considered to have uncertain minor positive effects on this objective. These alternative sites would have been solely residential development and were scored the same as the housing sites set out above.
- 5.196 Two out of the 17 alternative sites were considered to have minor adverse effects on this objective. Both of these sites would have been mixed use developments on existing employment land. The proposed takeaway shop (M048) and community facilities (M009) coupled with residential development was considered to have an adverse effect on encouraging sustained economic growth.
- 5.197 Four of the alternative sites were considered to have uncertain mixed effects on this objective. The sites are currently occupied by employment uses. Although the sites would have been for residential and employment development, the combination of the two could reduce employment opportunities, thus creating an adverse effect on encouraging sustained economic growth.
- 5.198 It is considered that if all sites are developed there is likely to be some mixed positive/negative **cumulative effects** on SA objective EC1 – To encourage sustained economic growth. Development of all the mixed use and employment sites should have a positive effect on strengthening the economy. Cumulatively all sites in the City Centre should help to increase vitality and viability. However, there could also be some negative cumulative effects on the economy associated with the loss of existing employment sites for residential development.

EC2 –To encourage and accommodate both indigenous and inward investment

- 5.199 **Table 5.23** summarises below where significant positive or negative effects were predicted for SA objective EC2, and highlights that only one site is predicted to have a significant positive effect, while no significant negative effects are predicted for any of the sites in relation to encouraging and accommodating indigenous and inward investment.

Table 5.23 Summary of significant effects for SA objective EC2 –To encourage and accommodate both indigenous and inward investment

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
None	None	R31 (++/?) R32 R42	None
Significant negative effects identified			
None	None	None	None

- 5.200 **Housing sites** were not assessed against this SA objective as it was considered they are unlikely to have an effect on business and economic performance.
- 5.201 The majority of the **mixed use** sites were considered to have a minor positive uncertain effect on this SA objective. It was considered that all mixed use sites have the potential to encourage some inward investment, improve economic performance, make land available for businesses and potentially support/encourage small city businesses which would have a positive effect on this objective. However, for some of these sites it was not clear what the specific type of development would be. The type of development is likely to influence the degree to which the site will affect economic performance and influence inward and indigenous investment etc. Where the specific site use was unknown, minor positive but uncertain effects have been recorded to reflect this uncertainty.
- 5.202 Mixed use site R43 was considered to have a minor positive effect on this objective. The site is allocated for a campus extension for university related uses. Although this use is unlikely to attract businesses, there is potential to encourage and accommodate inward investment associated with expansion of the university.
- 5.203 Site R5 of the mixed use sites was considered to have no effect on this objective. This is because the mixed use element is a community facility and is unlikely to improve economic performance.
- 5.204 Generally the **employment sites** performed well against this objective. Three of the six sites were considered to have minor positive but uncertain effects on this objective. Similar to the mixed use sites, these site policies state that office, retail, leisure development etc. is to take place at these sites which could encourage some inward investment, improve economic performance, make land available for businesses and potentially support/encourage small city businesses which would have a positive effect on this objective. However, for some of these sites it was not clear what the specific type of development would be. Where this is the case minor positive but uncertain effects have been recorded, to reflect the fact that there is some uncertainty associated with effects on this objective.
- 5.205 Three out of the six employment sites (R32, R41 & R42) were considered to have a significant positive effect on this objective. Site R32 is earmarked for Norwich airport development. Development of the airport is recognised as important to economic development locally as it could help to improve economic performance and encourage inward investment. Site R42 seeks to develop Low Carbon Building to encourage small and medium enterprises to develop and create jobs in connection with a low carbon economy. The site will also deliver business support to local businesses and the nature of the development could also encourage inward investment. Site R31 was considered to have uncertain, significant positive effects on this objective. The supporting text of this policy specifically states that development will help to provide more opportunities for small and start-up businesses. However, the intention is not carried through the policy text so there is some uncertainty.

- 5.206 Six of the **reasonable alternative** sites were not assessed against this SA objective as it was considered they are unlikely to have an effect on this objective as these sites are solely for residential development.
- 5.207 The majority of the reasonable alternative sites that were appraised against this objective were considered to have minor positive but uncertain effects. These sites have been identified as mixed use and could include potential business uses which could encourage inward investment, improve economic performance, make land available for businesses and potentially support/encourage small city businesses which would have a positive effect on this objective. However, it is not clear what the specific type of development would be so minor positive but uncertain effects have been recorded.
- 5.208 Alternative site M009 was considered to have no effect on this objective. This is because the mixed use element is a community facility and is unlikely to have an effect on inward investment or economic performance etc.
- 5.209 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective EC2 – To encourage and accommodate both indigenous and inward investment. All mixed use and employment sites are likely to have positive cumulative effects on improving economic performance. A number of sites also either directly or indirectly seek to encourage inward investment, make land available for businesses and support/encourage small city businesses.

EC3 – To encourage efficient patterns of movement in support of economic growth

- 5.210 **Table 5.24** summarises below where significant positive or negative effects were predicted for SA objective EC3, and highlights that three sites are predicted to have a significant positive effect, while no significant negative effects are predicted for any of the sites in relation to encouraging efficient patterns of movement in support of economic growth.

Table 5.24 Summary of significant effects for SA objective EC3 – To encourage efficient patterns of movement in support of economic growth

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
None	CC29 CC33	R31	None
Significant negative effects identified			
None	None	None	None

- 5.211 The majority of the **housing sites** (39 out of 40) were considered to have minor positive effects on this objective. The sites were assessed against their proximity to services and facilities, (listed in the SA framework assumptions, see **Appendix 4**). None of the sites are in close proximity (600m) of all the service and facilities. However, all 39 are within 300m of a sustainable transport option, providing residents with the opportunity to travel to work, shops, services etc. in a sustainable manner and contribute to efficient patterns of movement in support of economic growth.
- 5.212 Site R44 was considered to have no effect on this objective. The site is allocated for student accommodation and it is assumed that students will not be in full term, permanent employment while residing at this site, although it is acknowledged they could be in part time employment.
- 5.213 Generally the **mixed used sites** (32 out of 36) were considered to have minor positive effects on this objective. Similar to the housing sites, none of these sites are within 600m of all the services and facilities. However, all 32 are within 300m of a sustainable transport option, providing

residents and employees the opportunity to travel to and from work in a sustainable manner and contribute to efficient patterns of movement in support of economic growth.

- 5.214 Sites R10 and R11 were considered to have uncertain minor positive effects on this objective. The sites currently have poor access to sustainable transport options. The site policies state that this will be substantially improved, although these improvements rely on access being provided from other sites within this DPD. Development Management Policy DM1 requires development to reduce dependency on the private car. Furthermore Policy DM28 requires any proposed development to not result in an increase in travel across the city by private car and any anticipated increase in travel demand should be accommodated and diverted to non-car modes, securing sustainable access to essential services, facilities and jobs.
- 5.215 Two of the mixed use sites were considered to have a significant positive effect on this objective. Sites CC29 and CC33 are within close proximity of all the services and facilities and within 300m of a sustainable transport option. This greatly enhances the possibility of residents and employees traveling in a sustainable manner to and from these sites.
- 5.216 Five out of the six **employment sites** were considered to have a minor positive effect on this objective. Employment sites were only assessed against their proximity to sustainable transport options (see **Appendix 5**). All five of these sites are within 300m of a sustainable transport option which could have some positive effects on improving accessibility, particularly by walking, cycling and public transport, and contributing to efficient patterns of movement in support of economic growth.
- 5.217 Site R31 was deemed to have significant positive effects on this objective. The site is within close proximity (300m) of a sustainable transport option. In addition to this, the site policy states that a north-south pedestrian/cycle link and new bus link from Hurricane Way to Heyford Road will be delivered via site B. This will significantly increase employees' sustainable transport options to and from this site.
- 5.218 All of the **reasonable alternative sites** performed well against this objective. Although all of the sites were not within close proximity (600m) of all the services and facilities, they were within 300m of a sustainable transport option. This should encourage efficient patterns of movement in support of economic growth.
- 5.219 It is considered that if all sites are developed there is likely to be positive **cumulative effects** on SA objective EC3 – To encourage efficient patterns of movement in support of economic growth. All the mixed use and employment sites should have positive cumulative effects on improving the provision of local jobs. The majority of the sites are also accessible using sustainable transport, many propose to incorporate improvements to footpaths and cycle ways etc. and a number of sites include public transport provision (such as new bus links) which should help to encourage efficient patterns of movement.

EC4 – To improve the social and environmental performance of the economy

- 5.220 **Table 5.25** below summarises the sites where significant positive or negative effects were predicted for SA objective EC4. The table highlights that four reasonable alternative sites are predicted to have a significant adverse effect, while no significant positive effects are predicted for any of the sites in relation to improving the social and environmental performance of the economy.

Table 5.25 Summary of significant effects for SA objective EC4 – To improve the social and environmental performance of the economy

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
Significant positive effects identified (uncertainty shown by symbol ++?)			
None	None	None	None
Significant negative effects identified			

Housing sites	Mixed use sites	Employment sites	Reasonable alternatives
None	None	None	M001 (--/+) M003 (--/+) M002 (--/+) M009 (--/+)

- 5.221 The appraisal assessed **mixed use and employment** sites in terms of the effect of business development on the environment and also the impact businesses could have on residents. The sites were assessed against their proximity to environmental designations (see assumptions used under SA objectives ENV3, ENV4, ENV7) and heritage designations (see assumptions used under SA objective ENV5) and whether the site was within 600m of a bus stop or rail station, which could have a positive effect on improving the environmental performance of businesses. Sites that would contain business use with the potential to disturb local residents were considered to have an adverse impact on the social performance of businesses (e.g. significant traffic movements, noisy, anti-social hours).
- 5.222 **Housing sites** were not assessed against this objective as they do not include any type of employment development and so would not have an effect on the social and environmental performance of the economy
- 5.223 The majority of the **mixed use sites** (25 out of 36) were considered to have mixed uncertain effects on this objective. All these sites were considered to have positive, mixed or adverse effects on environmental/heritage designations. The sites proximity to sustainable transport was also taken into account and whether the employment use proposed was considered to be compatible with residential development, as set out above.
- 5.224 The remaining mixed use sites (11 out of 36) were considered to have a minor positive but uncertain effect on this objective. All these sites were considered to have a minor positive uncertain effect on this objective as cumulatively the developments would have positive/positive uncertain effects on environmental/heritage designations. The sites are also within close proximity to sustainable transport opportunities and the mix of uses proposed was considered to be compatible with residential use.
- 5.225 All of the **employment sites** were considered to have mixed uncertain effects on this objective. All of the employment sites were considered to have positive, mixed or adverse effects on environmental/heritage designations. The sites proximity to sustainable transport was also taken into account and whether the employment use proposed was considered to be compatible with residential development to reach the overall score for this objective.
- 5.226 Six of the **reasonable alternative sites** were considered to have mixed uncertain effects on this objective. These sites were scored uncertain mixed for the same reasons set out for the mixed use and employment sites.
- 5.227 Four of the reasonable alternative sites (see **Table 5.24**) were considered to have significant adverse, minor positive effects on this objective. Three of these sites (M001, M002 & M009) were considered to have significant adverse effects for SA Objective ENV7 (flood risk) and SA Objective ENV5 (Historic environment and heritage) but positive effects against some of the other criteria resulting in mix of significant adverse and minor positive effects on this SA objective. Site M003 was considered to have a significant adverse effect against SA Objective ENV7 (flood risk) and minor adverse effects against SA Objective ENV4 (Biodiversity) and SA Objective ENV5 (Historic Environment) but positive effects against some of the other criteria, resulting in a mix of significant adverse and minor positive effects against this SA Objective. Development Management Policies DM1, DM2, DM5, DM6, DM7, DM9, DM16 and DM28 will ensure that development is only permitted at sites where it can be demonstrated that the effect on environmental and heritage designations can be kept to an acceptable minimum through mitigation, where the employment uses proposed are compatible with existing uses and that sustainable transport options are/will be provided.

- 5.228 Two of the reasonable alternative sites were considered to have minor positive uncertain effects on this objective. All these sites were considered to have a minor positive uncertain effect on this objective as cumulatively the developments would have positive/positive uncertain effects on environmental/heritage designations. The sites were also within close proximity to sustainable transport opportunities and the mix of uses proposed was considered to be compatible with residential use.
- 5.229 Six of the alternative sites are only for residential development, therefore these sites were not assessed against SA objective EC4 – to improve the social and environmental performance of the economy.
- 5.230 It is considered that if all mixed use and employment sites are developed there is likely to be mixed positive/negative **cumulative effects** on SA objective EC4 – To improve the social and environmental performance of the economy. This objective draws on the conclusions of the assessment of sites under a number of other SA Objectives including ENV3 (air quality), ENV4 (biodiversity), ENV5 (historic environment) and ENV7 (flood risk). It is considered that there is likely to be a cumulative adverse effect on air quality, as cumulatively development is likely to lead to an increase in emissions to air from construction and potentially from increased car use. The cumulative effects on biodiversity are likely to be mixed. Many of the allocated sites are located within close proximity to a SSSI, SAC, LNR, CWS, RNR or a woodland which cumulatively could result in adverse effects through disturbance and increased visitor pressure to these sites. A number of sites are located on greenfield land and cumulatively this could lead to a negative effect on biodiversity through potential loss of habitats. Many of the sites include provision for new open space which could divert or relieve recreational pressure on nearby designated sites and may also offer opportunities to promote habitat connections and other benefits for biodiversity. Some sites also promote the enhancement or maintenance of features important for biodiversity (such as tree planting or the incorporation of green roofs or walls) which cumulatively could have positive effects on biodiversity. The cumulative effect on the historic environment is likely to be mixed. Overall development will remove a number of 'negative' buildings, improve local townscapes and historic frontages and restore a number of listed buildings. Some negative cumulative effects could occur from the development of some sites but this is likely to be outweighed by the positive benefits on townscape and the historic environment associated with development of the majority of sites. There is likely to be some adverse cumulative effects on flood risk. Although, the majority of the allocated sites are not located in a flood risk area, 25 sites are located within Flood Zone 2 or 3 or a Critical Drainage Area which cumulatively could have significant adverse effects on this objective. However, it is assumed that for these sites a flood risk assessment which should help to reduce adverse cumulative effects and could even result in beneficial effects.
- 5.231 **Site Policy Recommendations:** Any site policy recommendations set out under SA Objective ENV3, ENV4, ENV5 and ENV7 will also apply to SA objective EC4 – To improve the social and environmental performance of the economy.

Cross Boundary Effects

- 5.232 The appraisal of sites set out above has focused on effects within Norwich district boundary. However, Norwich doesn't sit in isolation. There are opportunities and constraints located outside the district boundary that the allocated sites could be affected by or which allocation of the sites could have an effect on.
- 5.233 One of the key cross boundary considerations from development in Norwich is the effect on national and international nature designations located outside the boundary. There are a number of designations located in close proximity to Norwich including Mid Yare (National Nature Reserve), Broadland (RAMSAR & SPA), The Broads (SAC, National Park) and the River Wensum (SAC) (which falls partly within the district boundary). The table below sets out the distance between these designations and the closest site allocation. The table highlights that the closest designation (River Wensum SAC) is greater than 1.5km from any of the site allocations.

Table 5.26 National and International Nature Designations located outside Norwich District boundary

Designation	Distance to closest site
Mid Yare (National Nature Reserve)	5098m from site R11.
Broadland (RAMSAR, SPA)	4666m from site NOR0128 (reasonable alternative) and 5098m from site R11.
The Broads (SAC)	4666m from site NOR0128 (reasonable alternative) and 5098m from site R11.
River Wensum (SAC)	1502m from site R39.

- 5.234 The proximity of sites to scheduled monuments outside the district has also been considered. Two scheduled monuments have been identified in close proximity to reasonable alternative site E008a (approximately 402m and 476m from this site).
- 5.235 It is considered that development of the allocated sites is unlikely to have a significant effects on any of these key designations due to the distance between the designations and the sites. In addition, policies within the JCS, the Development Management DPD and site specific policies within the Site Allocations DPD will seek to address cross boundary effects should help to minimise any adverse effects on these designations. Safeguards in the NPPF and policies in neighbouring districts should help to ensure no significant adverse effects will occur outside the Norwich boundary.

6 Conclusions

- 6.1 The proposed site allocations (including reasonable alternatives) have been subject to detailed appraisal against the SA Objectives that were developed at the scoping stage of the SA process. In general, it is considered there will be a wide range of positive and significant positive effects associated with the development of many of the sites. However, a number of potentially adverse and significant adverse effects were also identified.
- 6.2 In overall terms, development of the proposed housing, employment, mixed use allocated sites (as shown in **Tables 5.5 to 5.24**) are likely to have **significant positive effects** on the following SA objectives, sites with a significant positive score are shown in brackets:
- ENV1 - To reduce the effect of traffic on the environment (sites: CC13, CC14, CC15, CC18, CC35, R9, R17, R18, R41, CC2, CC4, CC5, CC7, CC8, CC17, CC24, CC25, CC26, CC27, CC28, CC29, CC31, CC33, CC34, R10, R11 & R31)
 - ENV5 - To maintain and enhance the quality of landscapes, townscapes and the historic environment (sites: CC20, CC21, CC22, R29, R34, R35, R38, CC1, CC2, CC4, CC7, CC8, CC11, CC19a, CC29, CC31, CC32, CC33, R10, R11, R33 & M008)
 - ENV6 - To adapt to and mitigate against the impacts of climate change (sites: CC13, CC14, CC15, CC18, CC35, R9, R17, R18, R41, R44, CC2, CC4, CC5, CC7, CC8, CC17, CC24, CC25, CC26, CC27, CC28, CC29, CC31, CC33, CC34, R43, R10, R11, R31 & R42)
 - ENV9 - To make the best of resources, including land and energy to minimise waste production (sites: R41, R10, R11 & R42)
 - SOC2 - To maintain and improve the health of the whole population and promote healthy lifestyles (site: R5)
 - SOC3 - To improve education and skills (sites: R43, R42)
 - SOC4 - To provide the opportunity to live in a decent, suitable and affordable home (sites: R41 & R10)
 - SOC5 - To build community identity, improve social welfare and reduce crime and social responsibility (sites: R6, R8, R28, R38, R46, CC7, CC8, CC9, CC32, CC33 & R24)
 - SOC8 - To improve accessibility to essential services, facilities and jobs (sites: CC29, CC31, CC32, CC33, R31, R42)
 - EC1 - To encourage sustained economic growth (sites: R3, R43 & R42)
 - EC2 - To encourage and accommodate both indigenous and inward investment (sites: R31, R32 & R42)
 - EC3 - To encourage efficient patterns of movement in support of economic growth (sites: CC29, CC33 & R31)
- 6.3 It is considered that some **significant negative effects** may occur on the following SA objectives, sites with a significant negative effect are shown in brackets:
- ENV5 - To maintain and enhance the quality of landscapes, townscapes and the historic environment (*site: R45*)
 - ENV7 - To avoid, reduce and manage flood risk (*sites: CC18, R22 & R46*)
 - ENV9 - To make the best of resources, including land and energy to minimise waste production (*sites: R46, R41, R44, R5 & R32*)
 - SOC7 - To improve the quality of where people live (*sites: R41, R44 & R5*)

6.4 Where relevant, recommendations have been made with regard to improvements or amendments that could be made to the site policies in order to strengthen and improve their likely sustainability effects. A summary of recommendations is set out below:

- **ENV1, ENV3 and ENV 6** - It is recommended that where sites are proposed to be car free, the intention to develop car free developments is stated specifically in the site policies. This would strengthen the likelihood of car free development occurring. It is recognised that Development Management Policy DM32 sets out criteria for residential development to be car free or acceptable as car free or low car housing which should help to ensure positive effects associated with car free or low car development occur.
- **ENV4** - In order to strengthen the likelihood of positive effects on biodiversity, we recommend that where intentions to maintain, protect or enhance biodiversity is stated in the supporting text to a site policy, the policy itself makes this explicit. In particular, it is recommended that site Policy CC1 is expanded to make reference to retaining and enhancing the wooded ridge which is located on part of the site and forms part of Richmond Hill. It is considered that all policies for development of sites on greenfield land should be amended to include measures to avoid, reduce or compensate for the loss of biodiversity.
- **ENV5** - a number of site specific recommendations have been made in relation to this objective, which would involve adding text to the policy as follows:
 - CC12 – The need to respect the setting of neighbouring listed and locally listed buildings.
 - CC5 –The need to respect the setting of on site listed buildings.
 - CC24 –The need to respect the setting of nearby listed and locally listed buildings and the City Wall.
 - CC34 - The need to respect the setting of nearby locally listed buildings and the line of the City Wall.
 - R3 - The need for the development not to be dominated by car parking.
 - R13 – The need to create a street frontage to Aylsham Road.
 - R24 –The need to create a street frontage to Aylsham Road.
- **ENV5** – It is recommended that where sites are within close proximity to the Broads National Park relevant site policies or the supporting text to the policy should make reference to the need to protect the setting of the National Park.
- **ENV7** - It is recommended that a commitment to mitigate flood risk at sites located in a Critical Drainage Area is included as a requirement in the relevant site policies.
- **SOC7** - it is considered that where noise has been identified as a potential issue, the requirement for a noise assessment and appropriate mitigation should be set out in the site policy.
- **EC4** – Although no significant adverse effects from allocated sites were identified, site policy recommendations set out under SA Objective ENV3, ENV4, ENV5 and ENV7 will also apply to SA objective EC4 – To improve the social and environmental performance of the economy.

Monitoring

- 6.5 The SEA Directive requires that "*member states shall monitor the significant environmental effects of the implementation of plans or programmes... in order, inter alia, to identify at an early stage, unforeseen adverse effects, and be able to undertake appropriate remedial action*" (Article 10.1) and that the environmental report should provide information on "*a description of the measures envisaged concerning monitoring*" (Annex 1 (i)). Monitoring proposals should be designed to provide information that can be used to highlight specific issues and significant effects, and which could help decision-making.
- 6.6 The government's SA Guidance (hosted on the Planning Advisory Service website) states that it is not necessary to monitor everything. Instead, monitoring should be focussed on the significant sustainability effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused) and the significant effects where there is uncertainty in the SA and

where monitoring would enable preventative or mitigation measures to be taken. The monitoring measures proposed in this SA Report therefore focus on the predicted significant effects only.

- 6.7 As discussed in **Chapter 5**, a number of the allocated sites in the Site Allocations DPD could have potential significant effects (both positive and negative) on the SA objectives. However, there are a number of SA objectives where no significant effects have been identified. Therefore, it is recommended that monitoring of sustainability effects due to implementation of the Site Allocations DPD is undertaken in relation only to those objectives where significant or uncertain effects were identified.
- 6.8 Monitoring the sustainability effects of developing any of the Allocated Sites should be conducted as part of an overall approach to monitoring the sustainability effects of the whole LDF (i.e. including the Joint Core Strategy and the Development Management Policies DPD). Annual Monitoring Reports are already produced for the Joint Core Strategy, and monitoring proposals for the Site Allocations DPD and the Development Management Policies DPD will be developed in the final versions of those DPDs. It is recommended that monitoring of the potential sustainability effects be undertaken as part of the annual monitoring process carried out for the LDF.
- 6.9 **Table 6.1** sets out a number of suggested indicators for monitoring the potential significant sustainability effects of implementing the Site Allocations DPD, drawing on indicators that are also used for the Joint Core Strategy monitoring where relevant. Note that the indicators proposed are included as suggestions at this stage, as it is recognised that many datasets may not be available for monitoring some of the sustainability effects of the Site Allocations DPD, and that the indicators included may change as NCC finalises the monitoring framework for the DPD itself.
- 6.10 In addition, the data used for monitoring in many cases will be provided by outside bodies. Information collected by other organisations (e.g. the Environment Agency) can also be used as a source of indicators.

Table 6.1: Monitoring Indicators for the Norwich Site Allocations DPD

SA objectives for which potential significant effects have been identified	Suggested indicators (showing source of indicator and where data collated if available)
ENV1: To reduce the effects of traffic on the environment	<ul style="list-style-type: none"> Proportion of journeys made by different modes (i.e. walking, cycling, public transport, car). Increase/decrease in traffic volumes within Norwich. <p><i>Source: Local Transport Plan monitoring; Census data.</i></p>
<p>ENV5: To maintain and enhance the quality of landscapes, townscape and the historic environment</p> <p><i>Significant negative effects identified in terms of potential effects on heritage assets such as listed buildings and conservation areas etc.</i></p> <p><i>Significant positive effects identified in terms of sites in a degraded state where new development could enhance the quality of the townscape.</i></p>	<ul style="list-style-type: none"> Heritage at risk – Number of: <ul style="list-style-type: none"> a) listed buildings, and b) scheduled ancient monuments on the buildings at Risk Register. <p><i>Source: English Heritage (Buildings at Risk)</i></p> Number of listed buildings lost/demolished <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> Reviews of townscape character/historic environment assessments could help to determine improvements or negative effects on Norwich's townscape and conservation

SA objectives for which potential significant effects have been identified	Suggested indicators (showing source of indicator and where data collated if available)
	<p>areas.</p> <p><i>Source: Not currently collected.</i></p>
<p>ENV6: To adapt to and mitigate against the impacts of climate change</p>	<ul style="list-style-type: none"> • Total CO₂ emissions per capita • Decentralised and renewable or low carbon energy sources permitted in major development <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <p>Note: Flood risk covered by ENV7.</p>
<p>ENV7: To avoid, reduce and manage flood risk</p>	<ul style="list-style-type: none"> • Development permissions granted contrary to Environment Agency advice on flood risk. • Number of dwellings permitted within the high risk flood areas (Environment Agency Flood Zones 2 and 3) <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p>
<p>ENV9: To make the best use of resources, including land and energy to minimise waste production</p> <p><i>Significant negative effects identified in terms of loss of greenfield, and high grade agricultural land, as well as loss of playing fields and open space.</i></p> <p><i>Significant positive effects identified in terms of re-use of previously developed land.</i></p>	<ul style="list-style-type: none"> • Dwellings built on greenfield land. • Development built on best and most versatile agricultural land. <p><i>Source: Not currently collected.</i></p> <ul style="list-style-type: none"> • Dwellings built on previously developed land or as conversions. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • Development permissions granted that include loss of recreational assets such as playing fields and open space. <p><i>Source: Not currently collected.</i></p>
<p>SOC2: To maintain and improve the health of the whole population and promote healthy lifestyles</p>	<ul style="list-style-type: none"> • Healthy life expectancy at age 65 of a) males and b) females. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • Indices of health deprivation. <p><i>Source: DCLG</i></p>

SA objectives for which potential significant effects have been identified	Suggested indicators (showing source of indicator and where data collated if available)
SOC3: To improve education and skills	<ul style="list-style-type: none"> • Workforce qualifications - % of working age population with qualifications at NVQ Level 4 or above. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • School leaver qualifications - % of school leavers with 5 or more GCSEs at A*-C grades. <p><i>Source: Norwich Local Development Framework: Annual monitoring report. Norwich City Council.</i></p>
SOC4: To provide the opportunity to live in a decent, suitable and affordable home	<ul style="list-style-type: none"> • Net housing completions. • Affordable housing completions. • New house completions by bedroom number, based on the proportions set out in the most recent Sub-regional Housing Market Assessment. • Housing to meet the needs of older people, defined as a key group in the housing market assessment. Assessed by satisfaction of people over 65 with both home and neighbourhood. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p>
SOC5: To build community identity, improve social welfare and reduce crime and social responsibility	<ul style="list-style-type: none"> • Reduction in overall crime. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p>
SOC7: To improve the quality of where people live	<ul style="list-style-type: none"> • Unfit housing – % of homes from overall housing stock not meeting the 'Decent Homes Standard'. • % of public housing stock built to the standard of the Code for Sustainable Homes (indicator pending). <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • Development permissions granted that include loss of recreational assets such as

SA objectives for which potential significant effects have been identified	Suggested indicators (showing source of indicator and where data collated if available)
	<p>playing fields and open space.</p> <p><i>Source: Not currently collected.</i></p>
<p>SOC8: To improve accessibility to essential services, facilities and jobs</p>	<ul style="list-style-type: none"> • Accessibility to market towns and key centres of employment during the morning peak (0700-1000), returning in the afternoon peak (1600-1900). • Accessibility of leisure and recreation facilities. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • Ward Level JSA Claimant Count Unemployment. <p><i>Source: Norwich Economic Barometer, Norwich City Council.</i></p>
<p>EC1: To encourage sustained economic growth</p>	<ul style="list-style-type: none"> • New business registration rate per 10,000 population 16+. • New business registration rate as a percentage of business stock. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p> <ul style="list-style-type: none"> • Median earnings. <p><i>Source: Norwich Economic Barometer, Norwich City Council.</i></p>
<p>EC2: To encourage and accommodate both indigenous and inward investment</p>	<ul style="list-style-type: none"> • Amount of floorspace developed by employment type. • Net change in retail floorspace in city centre. <p><i>Source: Joint Core Strategy for Broadland, Norwich and South Norfolk: Annual Monitoring Report. Greater Norwich Development Partnership.</i></p>
<p>EC3: To encourage efficient patterns of movement in support of economic growth</p>	<ul style="list-style-type: none"> • Proportion of travel to work journeys made by different modes (i.e. walking, cycling, public transport, car). <p><i>Source: Local Transport Plan monitoring; Census data.</i></p> <ul style="list-style-type: none"> • Heavy goods vehicle volumes and movements. <p><i>Source: Not currently collected.</i></p>