



SCOTT WILSON Planning & Environment
Sustainability Appraisal / Strategic Environmental
Assessment of the South Kesteven District Council
Core Strategy Preferred Options

S U S T A I N A B I L I T Y A P P R A I S A L
R E P O R T

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Sustainability Appraisal (SA) / Strategic Environmental Assessment (SEA) of the South Kesteven District Council Core Strategy Preferred Options Sustainability Appraisal Report 02/05/2006

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1 INTRODUCTION

1.1 Sustainability Appraisal and Strategic Environmental Assessment

- 1.1.1 In 2006 Scott Wilson was commissioned to undertake the Sustainability Appraisal (SA) / Strategic Environmental Assessment (SEA) of the South Kesteven Core Strategy Preferred Options.
- 1.1.2 SEA involves the systematic identification and evaluation of the environmental impacts of a strategic action (e.g. a plan or programme). In 2001, the EU legislated for SEA with the adoption of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive'). The aim 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 and programmes, with a view to promoting sustainable development"*.
- 1.1.3 The Directive was transposed into English legislation by the Environmental Assessment of Plans and Programmes Regulations 2004 (the 'SEA Regulations'), which entered force on 21st July 2004. The SEA Regulations apply (with some specific exceptions) to plans and programmes subject to preparation and / or adoption by a national, regional or local authority or prepared by an authority for adoption through a legislative procedure by Parliament or Government and are required by legislative, regulatory or administrative provisions.
- 1.1.4 SA extends the concept of SEA to encompass economic and social concerns. Under the Planning and Compulsory Purchase Act 2004 (PCPA), Local Authorities must undertake SA for each of their Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs) – the constituent parts of the LDF. SA is therefore a statutory requirement for LDFs along with SEA.
- 1.1.5 The Government's approach is to incorporate the requirements of the SEA Directive into a wider SA process that considers economic and social, as well as environmental effects. To this end, in September 2004, the Government published draft guidance¹ on undertaking SA of LDFs that incorporates the requirements of the SEA Directive ('the Guidance'). The combined SA / SEA process is referred to in this document as Sustainability Appraisal (SA).
- 1.1.6 The Guidance advocates a five-stage approach to undertaking SA (see Figure 1). According to the Guidance, the Scoping Report should set out the findings of Stage A (which includes gathering an evidence base)

¹ ODPM (2005). Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks

together with information on what happens next in the process.

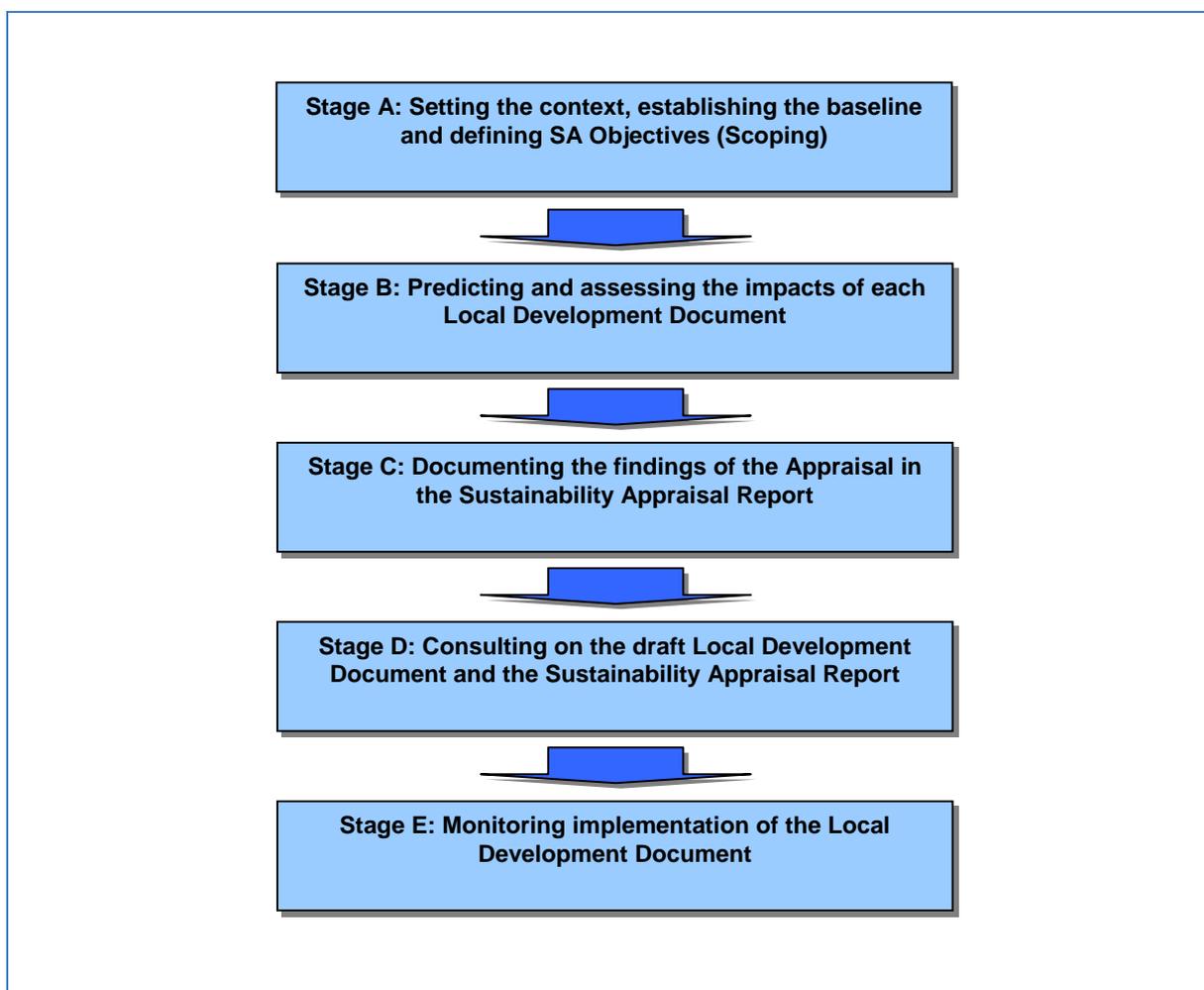


Figure 1.1: Five-stage approach to SA

1.2 Compliance with the SEA Regulations

1.2.1 The SEA Regulations set out a legal assessment process that must be followed. In light of this, Table 2 sets out the relevant requirements of the SEA Regulations and explains how these have been satisfied (or will be satisfied). In particular, the SEA Regulations require the preparation of an 'Environmental Report' on the implications of the plan or programme in question. The contents of this Scoping Report will form part of the Environmental Report.

Table 1.1: Compliance with the SEA Regulations

Requirement	Where met
Contents and main objectives of plans and programmes that may affect the plan	Chapters 4 - 17 (context review)
Relevant aspects of the current state of the environment and its likely evolution without the implementation of the plan	Chapters 4 - 17
The environmental characteristics of the areas likely to be significantly affected	Chapters 4 - 17
Any existing environmental problems (issues) in particular those relating to areas designated under the Habitats and Birds Directives	Chapters 4 - 17
The environmental protection objectives which are relevant to the plan or programme, and the way those objectives have been taken into account in its preparation	Chapters 4 - 17
The likely significant effects on the environment (and economic and social impacts)	Chapters 4 - 17
The measures envisaged to prevent, reduce and as fully as possible offset any significant effects on the environment	Chapters 4 - 17; Chapter 17
An outline of the reasons for selecting the alternatives dealt with ...	Section 2.4
... and a description of how the assessment was undertaken, any problems, etc.	Chapter 3
A description of the measures envisaged concerning monitoring	Chapter 18

1.3 South Kesteven Local Development Framework

- 1.3.1 South Kesteven District Council (hereafter 'The Council') has begun the process of replacing its existing Local Plan (1995) with a new LDF. South Kesteven's new LDF will adopt a spatial approach to planning which goes beyond the use and regulation of land. It will give spatial expression to South Kesteven's Community Strategy, other Council strategies, and to the development proposals of other key service providers in the District. It will provide a clear, coherent and deliverable framework for the future development of South Kesteven.
- 1.3.2 The Local Development Scheme for South Kesteven, which sets out the framework of planning documents for the District, was adopted in April 2005. It sets out which Local Development Documents (DPDs and SPDs) will form part of the LDF and the timetable for their production.
- 1.3.3 Please send responses to:

Mike Sibthorp,
Head of Planning Policy and Economic Regeneration,
Council Offices,
St Peters Hill,
Grantham, NG31 9PZ

2 METHODOLOGY

2.1 Introduction

2.1.1 This section discusses the methods used to undertake the appraisal of the likely significant effects of the Preferred Options and alternatives.

2.2 Sustainability Appraisal Scoping Report

2.2.1 South Kesteven District Council has produced a Scoping Report that outlined the scope and level of detail of the SA. This can be found on the Council's website at: <http://www.southkesteven.gov.uk/>

2.2.2 Elements of the Scoping Report are reproduced in this SA Report, in particular the baseline data and context review that were used to define the key sustainability issues.

2.3 Method of assessment

2.3.1 The SEA Regulations require the assessment of the likely significant effects of the Core Strategy Preferred Options on issues such as:

- Air
- Water
- Soil
- Biodiversity (including flora and fauna)
- Population
- Human health
- Climate
- Material assets
- Cultural heritage (including archaeology)
- Landscape
- And the interrelationship between the above factors

2.3.2 The SA process widens the scope of SEA to include social and economic factors. In this SA Report the following additional topics are discussed:

- Economy
- Employment
- Transport
- Crime
- Housing

2.3.3 This SA Report includes a chapter on each of the above subjects, structured as follows:

- Introduction
- Legislation - the regulatory framework for the topic area (environmental topics only)
- Baseline - the current baseline in South Kesteven, where data is available, for the topic area
- Context Review - a review of related plans and programmes that have a bearing on the topic area, drawing on the context review undertaken by the Council in the SA Scoping Report
- Likely future conditions - probable conditions without the influence of the Preferred Options (i.e. the 'future baseline')
- Likely significant effects of the Core Strategy Preferred Options - including an assessment of any alternatives mentioned in the text
- Proposed mitigation - recommended measures to ameliorate adverse impacts or enhance beneficial impacts
- Proposed monitoring - recommended ongoing monitoring of significant effects

2.3.4 The Core Strategy Preferred Options were examined in relation to each of the social, economic and environmental topics listed above and, where a significant effect was identified, it is discussed.

2.3.5 The Scoping Report includes a list of SA Objectives, these are reproduced below:

- To ensure that the housing needs of the community are met, in particular the affordable housing requirements
- To facilitate improved health provision where appropriate
- To facilitate the provision of recreational facilities for all
- Contribute to community safety by encouraging good design
- To ensure that development is located in the most sustainable locations to minimise adverse environmental impact
- To protect and enhance the District's cultural, built and archaeological heritage
- To protect and enhance the District's Natural Assets and Biodiversity
- To enhance and conserve the environment of the District through sustainable design and development
- To manage prudently the natural resources of the district to reduce vulnerability to flood risk
- To minimise energy usage through sustainable design and development
- Conserve soil resources and quality
- Conserve water resources and quality
- To minimise waste and encourage recycling and reuse of waste
- To maintain and enhance the quality of rural and urban areas
- To encourage employment opportunities for all
- To facilitate the development of new technology to support a modern

economic infrastructure

- To improve accessibility to jobs and services by increasing the use of public transport, walking and cycling
- To improve the social and environmental performance of the economy

2.3.6 These are used to appraise the cumulative effects of the Core Strategy Preferred Options. The cumulative appraisal is presented at the end of this report.

2.4 Alternatives

2.4.1 Alternatives to the Preferred Options are also referred to in the text. The alternatives were developed at the same time as the Preferred Options. It is important to appreciate that the Council is constrained in the development of alternatives by national, regional and Structure Plan policies. These have shaped the Preferred Options and Allocations.

2.4.2 Certain Preferred Options were taken from the aborted Local Plan Review of 2001. Others were influenced by background studies, such as the Housing Needs Assessment, Retail Study and Employment Land Study.

3 POPULATION

3.1 Introduction

3.1.1 This chapter discusses the population of South Kesteven, its composition and distribution, now and in the future and the likely effects of the Core Strategy Preferred Options.

3.2 Legislation

- **The Race Relations Act 1976** - the amended Race Relations Act 1976 gives public authorities a general duty to promote race equality and good race relations
- **Disability Discrimination Act 2005** - guarantees disabled people rights in employment; education; access to goods, facilities and services; and buying or renting land or property

3.3 Population Baseline in South Kesteven

3.3.1 The total population of South Kesteven and its breakdown by sex and age is shown in Table 3.1 below:

Table 3.1: Population distribution in South Kesteven (2001)

	South Kesteven	East Midlands	England & Wales
Total Population	127,000	4,252,000	59,554,000
- Male	62,000	2,094,000	29,108,000
- Female	65,000	2,159,000	30,446,000
Aged 0 to 15	20%	19.6%	19.7%
Aged 16 to 74	60.4%	61.7%	61.8%
Aged 75 and over	19.7%	18.8%	18.5%
Total population % change 1981-2003	+28.6%	+ 10.4%	+5.7%
Average age	39.5 years	Not known	38.7 years

Source: National Statistics

3.3.2 According to the mid-2003 population estimates the population of South Kesteven had risen to 126,600, of whom 5 per cent were children under five and 20 per cent were of retirement age (65 and over for males or 60 and over for females). The equivalent figures for England and Wales overall were 6 per cent under five and 19 per cent of retirement age.

3.3.3 In the twenty years between 1982 and 2002 the population of South

Kesteven grew by 27 per cent, compared with an increase of 10 per cent for the East Midlands region as a whole. Despite the higher than regional average population growth, the District remains largely rural. The population density of South Kesteven in 2002 averaged 133 people per square kilometre, compared with an average of 270, for the region and 380 people per square kilometre for England overall.

Table 3.2: Population density in South Kesteven (2002)

Population Density per square kilometre		
South Kesteven	East Midlands	England
133	270	380

Source: National Statistics

3.3.4 The District is relatively homogeneous in terms of ethnicity and religion, with few minority groups. The great majority of residents were born in the UK. These features are shown in Table 3.3.

Table 3.3: Ethnicity and religion in South Kesteven (2002)

Category	Numbers of people
Ethnic group	
- White	122,836
- Mixed	652
- Asian or Asian British	581
- Black or Black British	192
- Chinese or Other Ethnic Group	531
Place of birth (all people)	
- UK	119,208
- Elsewhere in EU (incl. Rep. Ireland)	2,409
- Outside EU	3,175
Religion (all people)	
- Christian	101,488
- Buddhist	189
- Hindu	236
- Jewish	79
- Muslim	307

- Sikh	95
Other	259
- No religion	14,360
- Religion not stated	7,779

Source: National Statistics

3.3.5 The District Council manages the gypsy and travellers site located at Spittlegate Level, Grantham. The County Council has overall responsibility for the site and has developed policies in respect of gypsies and travellers. Arrangements between the two councils are subject to a partnership agreement.

3.4 Context Review

3.4.1 The key messages of the context review include:

Key Messages from the Context Review	Evidence Source
Deliver social progress which recognises the needs of everyone; effective protection of the environment; prudent use of natural resources; and the maintenance of high and stable levels of economic growth and employment	PPS1 Delivering Sustainable Development (2005)
Need to improve the quality of life and the environment in rural areas; promote more sustainable patterns of development by focusing most development in, or next to, existing towns and villages; improve economic performance; promote sustainable, diverse and adaptable agriculture sectors	PPS7 Sustainable Development in Rural Areas (2004)
Promote and support the development and growth of social capital across the communities of the region	PPS1 Delivering Sustainable Development (2005), PPS12 Local Development Frameworks (2004)

3.5 Likely future conditions

3.5.1 In the UK as a whole the population is projected to increase from 59.8 million (mid-2004) to 65.7 million by 2031 (Source: Government Actuary's Department mid-2003 population projection). South Kesteven is expected to increase in population to a projected 141,400 by 2021 (Source: ONS). The Lincolnshire Structure Plan has assigned a figure of 9,200 new dwellings to South Kesteven in the period 2001-2021, in order to cater for the expected growth in population and other demographic changes, such as the trend towards smaller households. This figure may be revised in future by the emerging East Midlands Regional Spatial Strategy.

3.5.2 Similarly the proportion of the District's population aged 65 and over will increase. The working age population will fall in size as the so-called 'baby

boomers' move into retirement and are replaced by the relatively smaller generations of people who have been born since the mid-1970s.

- 3.5.3 The religious and ethnic composition of the population is also likely to change. Increasing mobility means that, in future, more people living in South Kesteven will have been born outside the District or its immediate surroundings.

3.6 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential development in South Kesteven

- 3.6.1 The sequential approach set out in the option means that population growth will be directed towards Grantham in the first instance. This suggests the relative importance of the town within the District is likely to grow. Only "modest" levels of development are anticipated for the market towns of Stamford, Bourne and the Deepings. This represents a significant departure from the policy in the current Local Plan, which provided for substantial new development at Bourne (in particular) between 1990-2001.

Preferred Option 5: Providing for affordable housing

- 3.6.2 Preferred Option 5 calls for 50% affordable housing and 50% market housing in new residential development. As this is a higher than usual proportion of affordable housing, this may subtly influence the social make-up of new developments.

3.7 Proposed mitigation measures

- 3.7.1 No mitigation measures are proposed.

3.8 Proposed monitoring

- 3.8.1 The following contextual indicators are proposed as part of the Monitoring Framework:
- Total population
 - Population structure by age
 - Population structure by sex
 - Population structure by ethnic background
 - Population structure by social grade

4 HUMAN HEALTH

4.1 Introduction

4.1.1 Health can be defined as a state of complete physical, mental and social well-being and not merely the absence of disease. This chapter discusses how the Core Strategy Preferred Options are likely to influence public health in South Kesteven.

4.1.2 Although the District Council has responsibility for certain aspects of public health, for instance trading standards or local air quality management, health matters are not directly influenced through land-use planning and the Local Development Framework. However planning can indirectly affect the key determinants of public health, among them housing, air quality, employment and education.

4.2 Legislation

4.2.1 Current legislation affecting public health in the UK includes:

- **Mental Health Act 1983** - makes provision for the compulsory detention and treatment in hospital of those with mental disorders
- **Disability Discrimination Act 1995** - makes discrimination against people with disabilities unlawful
- **Health Act 1999** - addresses arrangements and payments between health service bodies and local authorities with respect to health and health-related functions
- **Care Standards Act 2000** - established a regulatory framework for social care and improve protection of vulnerable people
- **NHS Reform and Health Care Professions Act 2002** - guidance issued to Primary Care Trusts and Strategic Health Authorities
- **Mental Capacity Act 2005** - provides a statutory framework to protect vulnerable people, carers and professionals

4.3 Health Baseline in South Kesteven

4.3.1 In general, public health in South Kesteven is somewhat better than the national and regional averages. Perhaps the most fundamental measure of health is life expectancy. Table 4.1 shows that the life expectancy at birth of people in South Kesteven is up to a year longer than England and Wales or the East Midlands.

Table 4.1: Life expectancy at birth in years (2002)

Area	Male	Female
England and Wales	76.14	80.65
East Midlands	76.30	80.50
South Kesteven	77.40	81.90

Source: Office of National Statistics

4.3.2 People clearly feel better than average in South Kesteven, too. Self-assessed health is somewhat better in the District than in the East Midlands or England and Wales.

Table 4.2: Self-assessed health in previous twelve months (2001)

Area	Good health	Fairly good health	Not good health
England and Wales	35,676,210 (69%)	11,568,363 (22%)	4,797,343 (9%)
East Midlands	2,819,752 (68%)	970,957 (23%)	381,465 (9%)
South Kesteven	88,110 (70%)	27,678 (22%)	9,004 (7%)

Source: Office of National Statistics (Indicator UV20)

4.3.3 Hospital episode statistics are given in the Table below.

Table 4.3: Hospital Episodes in South Kesteven (April 2002 - March 2003)

Episode	Males		Females	
	16-59	60+	16-59	60+
Heart Disease	243	707	113	515
Stroke	25	128	12	178
Cancer	489	1,028	816	836
Accident	373	175	146	409
Coronary Bypass or Angioplasty	26	55	Not available	17

Source: ONS and Health and Social Care Information Centre (HSCIC)

4.3.4 In the Indices of Deprivation 2004, South Kesteven was ranked at 256 out of 354 local authorities in England, where 1 was the most deprived area and 354 the least deprived.

4.3.5 In 2003 there were a total of 104 people killed or seriously injured in road accidents in the District.

4.4 Context Review

4.4.1 The following represent the current key objectives of the healthcare community in South Kesteven:

Key Messages from the Context Review	Evidence Source
Overarching principles: Reducing the numbers of people who smoke; Reducing obesity and improving diet and nutrition; Increasing exercise; Encouraging and supporting sensible drinking; Improving sexual health; Improving mental health	Choosing Health: Public Health White Paper
Targets set for: Access to emergency care and planned care; Cancer; Coronary Heart Disease; Mental Health; Older People; Life Chances for Children; Improving Patient Experience; Reducing Health Inequalities; Drug Misuse	Trent Strategic Health Authority Local Delivery Plan
Main themes: Giving children the best start in life; Promotion of health, independence and self care; Caring for people with long term conditions; Caring for people leaving hospital; Planned hospital care; Emergency care when and where needed; Maintaining the independence of older people; Recruitment, retention and development of staff	Lincolnshire Health and Social Care Partnership Board (includes United Lincolnshire Hospitals NHS Trust), Strategic Framework 2005 –2015

4.5 Likely future conditions

4.5.1 Since people in the UK as a whole are known to be living longer, healthier lives, it seems reasonable to assume that public health overall will continue the long-term trend of improvement, albeit with some specific concerns in relation to, for example, sexually transmitted diseases or drug and alcohol misuse. However the data above only represent a snapshot of the health baseline in South Kesteven and data to establish a trend is lacking, making it impossible to demonstrate this assumption conclusively for the District.

4.6 Likely significant effects of the Core Strategy Preferred Options

4.6.1 The Core Strategy is principally a spatial planning document and has little direct bearing on public health. It does, however, set development policy for the District and, thereby, can indirectly influence health. Preferred Options that have a bearing on air quality are discussed in Chapter 12. These same options could have indirect health effects, especially over the long term. However as air quality in the District is generally good, these effects (some beneficial, some adverse) would probably not be significant.

4.6.2 Employment and housing are also often cited as key determinants of health. For a variety of reasons, employed people generally have better health than those who are not working. Equally a 'decent home', as opposed to an unfit dwelling or no home at all, is a prerequisite of a healthy lifestyle. Employment and housing effects are considered in the relevant chapters of

this report. Where the Preferred Options have beneficial effects on housing and employment it can be assumed that there will also be indirect health benefits. It is likely that most of these effects will not be significant, those that may be significant are discussed below.

Preferred Option 5: Affordable Housing

- 4.6.3 According to the South Kesteven Housing Strategy 2004-07, affordable housing is "*provided...to people...who are unable to rent or purchase housing on the open market [and] either let at rents approved by the local authority or sold as shared ownership housing / low cost home ownership*". In other words, non-market housing is provided to people who would otherwise have difficulty in finding somewhere to live.
- 4.6.4 Affordable housing will be of direct benefit to the health of homeless people. The Housing Strategy suggests that homelessness remains a substantial problem in the District with 200-300 applications per year being received by the Council between 1998/9 and 2002/3. The problem is compounded by a lack of affordable housing and particular problems with young vulnerable applicants, especially involving drug issues.
- 4.6.5 Those people not homeless but experiencing difficulty in paying for somewhere to live will also benefit. Key workers, which include health workers, may also be able to take advantage of affordable housing. This would help attract staff to work in the health service and represents a further health benefit of affordable housing.
- 4.6.6 The Preferred Option calls for 50% of dwellings on all sites of 15 or more houses to be affordable housing, which is higher than the 30-40% more usually seen elsewhere. This would represent some 4,600 affordable dwellings out of the total of 9,200 anticipated for the District in 2001-2021 by the Lincolnshire Structure Plan. In fact the total would not be this high: as the South Kesteven Urban Capacity Study (consultation draft, 2005) makes clear, some of this housing has already been built or would be delivered on sites with a capacity of fewer than fifteen dwellings.
- 4.6.7 Nevertheless, the Preferred Option would still be likely to provide well in excess of 3,000 affordable houses by 2021. It is therefore likely to be indirectly of significant benefit to public health in the District.

4.7 Proposed mitigation measures

- 4.7.1 Through the Housing Needs Survey, the Council has identified a need to provide housing that can be adapted for use by people with disabilities. The Council is considering how this could best be incorporated into the Preferred Options.

4.8 Proposed monitoring

4.8.1 Many of the indicators proposed in other chapters will present a picture of the key determinants of public health. Indicators to measure health outcomes should form part of the SA Monitoring Framework. Ideally these should conform to the priorities set out in the Lincolnshire Health and Social Care Partnership Board (LHSCP) Strategic Framework 2005 –2015. These priorities are:

- Giving children the best start in life
- Promotion of health, independence and self care
- Caring for people with long term conditions
- Caring for people leaving hospital
- Planned hospital care
- Emergency care when and where needed
- Maintaining the independence of older people
- Recruitment, retention and development of staff

4.8.2 It is recommended that the Council consults the LHSCP with a view to obtaining data to monitor performance against these priorities.

5 ECONOMY

5.1 Introduction

5.1.1 The performance of the economy has a fundamental bearing on the achievement of sustainable development. It has beneficial and adverse impacts. On one hand there are negative aspects, such as pollution from industry or traffic, while on the other hand the economy provides employment and generates wealth. A sustainable economy should be seen as a part of the wider social and natural environment and it should exist in harmony with these wider elements.

5.1.2 This chapter examines the impacts of the Core Strategy Preferred Options on economic development within the District.

5.2 Economic Baseline in South Kesteven

5.2.1 Lincolnshire is among England's foremost agricultural counties. Some 87% of the county is given over to agriculture, 77% being used for crops such as wheat, barley, oilseed rape, sugar beet, potatoes, bulbs and flowers. (Source: Eurostat - Office for National Statistics)

5.2.2 Arable farming on large mechanised farms predominates. While this means that the county's agriculture and horticulture is highly efficient, the high degree of mechanisation means that the industry provides little direct employment (see Table 5.1).

Table 5.1: Workforce by employment sector (percentage of total) (2003)

Sector	South Kesteven	East Midlands	England and Wales
Agriculture & Fishing	0.4%	0.4%	0.2%
Energy & Water	0.4%	0.8%	0.6%
Manufacturing	22.8%	18.5%	12.7%
Construction	4.5%	4.7%	4.4%
Distribution, Hotels & Restaurants	27.9%	25.0%	25.0%
Transport & Communications	5.9%	5.8%	6.2%
Banking, Finance & Insurance	9.6%	14.5%	20.5%
Public Administration, Education & Health	23.6%	25.9%	25.3%
Other Services	4.7%	4.4%	5.0%

Source: National Statistics

- 5.2.3 The importance of agriculture has largely determined the industries that have developed in Lincolnshire's towns: food processing, agricultural machinery and distribution being examples. However, the predominance of agriculture and horticulture helps keep average earnings in Lincolnshire amongst the lowest in England. It is thought that a large proportion of seasonal work in agriculture is often formed from illegal or 'grey' economy migrant workers. (Source: Eurostat - Office for National Statistics)
- 5.2.4 South Kesteven is located in South West Lincolnshire, and takes in the market towns of Grantham, Stamford, Bourne and The Deepings, and over 100 villages and hamlets. Grantham has a population of 33,918 and a travel-to-work population of over 60,000. A significant proportion of the district's population also commute to work outside the district, especially to Peterborough, Nottingham, Newark and London. Grantham and Stamford are adjacent to the A1, offering easy access to both London and the north of England. Other major roads in the district include the A52, A607, A15 and A16 - providing links with the major industrial cities of the East Midlands and coastal parts of Lincolnshire and East Anglia.
- 5.2.5 South Kesteven is served from Grantham by the east coast mainline railway, which provides a fast link to London. East Midlands Airport is 35 miles from Grantham and the ports of Boston, Hull, Harwich and Felixstowe are all accessible from the District.
- 5.2.6 On 1 April 2004 South Kesteven had 1,251 retail premises (including shops, financial and professional services and food and drink outlets, but excluding public houses and hotels.) There were also 605 offices, 696 factories and 560 warehouses. These totals exclude leisure and sports premises, as well as public facilities such as schools, hospitals and libraries. (Source: NOMIS Official Labour Market Statistics)

Table 5.2: VAT Registrations and business stock (2004)

Sector	South Kesteven	East Midlands	England and Wales
VAT Registration Rate (2004)	10%	10%	10%
VAT De-Registration Rate (2004)	8%	9%	10%
Business Stock start 2004	10%	10%	10%

Source: NOMIS Official Labour Market Statistics

5.3 Context Review

5.3.1 The findings of the Context Review from the Scoping Report are reproduced here:

Key Messages from the Context Review	Evidence Source
Ensure that there is sufficient land available which is capable of development and is well served by infrastructure Ensure that there is a variety of sites available to meet differing needs Encourage the re-use of urban land	PPG4 Industrial, commercial development and small firms
Overall objective is to facilitate the growth of new communications systems in order to provide a wider choice, while protecting human health and keeping environmental impact to a minimum	PPG8 Telecommunications
Promote the development of the English regions by improving their economic performance so that all are able to reach their full potential	PPS7 Sustainable Development in Rural Areas
Flood risk could constrain further growth particularly in and around Market Deeping and Bourne Part of this area is in Zone 2 so is liable to a 'moderate' chance of flooding	PPG25 Development and Flood Risk

5.4 Likely future conditions

5.4.1 It is likely that agriculture, agricultural services and related manufacturing will continue to form the most significant part of the local economy, although agriculture itself will probably form an ever-smaller source of employment if the trend towards increasing mechanisation continues. Migrant workers are likely to form an important part of the workforce for the foreseeable future.

5.4.2 Services - tourism, hotels and catering - will also continue to be important to the South Kesteven economy, especially as a source of employment. The evening economy could be influenced in future by the Licensing Act (2005), and consequent changes to the pattern of social and economic behaviour in town centres.

5.4.3 Northfields, on the edge of Market Deeping, is presently seeing major infrastructure development. It is thought that least 150 new jobs will be created by this development in the short term.

5.5 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

5.5.1 New development is directed from rural areas by this option but there is a risk this may detract from economic investment in rural areas. The option restricts economic development to traditional rural enterprise (agriculture,

forestry and equine uses) and services, or "*rural diversification projects with proven need*". The economic baseline clearly demonstrates the predominance of agriculture in the District's economy and there may be a case for removing the phrase 'with proven need' from this formula in order to further facilitate economic diversification.

Preferred Option 12: Reducing the risk of flooding and protecting water resources

5.5.2 This option could constrain development in the South East of the District, particularly in and around Market Deeping and Bourne. Part of this area has been identified as a Flood Risk Zone 2 by the Environment Agency so is liable to a 'moderate' chance of flooding. The Core Strategy Preferred Options do not state where new development will be located, since this is an issue for the Housing and Employment Allocations Development Plan Document. A more detailed assessment of this risk will be considered during the appraisal of the Allocations Preferred Options.

5.6 Proposed mitigation measures

5.6.1 There may be a case for removing the phrase "*with proven need*" from the sub-clause in Preferred Option 12, dealing with rural diversification projects.

5.7 Proposed monitoring

5.7.1 It is suggested that the following indicators are incorporated in the Monitoring Framework:

- Business registrations and de-registrations (available from NOMIS)
- Gross Domestic Product per capita (available from National Statistics)

6 EMPLOYMENT

6.1 Introduction

6.1.1 The previous chapter concerned the economy of South Kesteven and the likely significant effects on business resulting from the Core Strategy Preferred Options. This chapter deals specifically with the significant effects on employment. Clearly any expansion or contraction of the economy is likely to have an indirect effect on employment in the District, however the relationship is not straightforward.

6.1.2 As previously discussed, agriculture forms the centrepiece of the economy of South Kesteven, however direct employment in the sector is very limited. The majority of jobs are in sectors that support agriculture. Moreover many people commute to jobs outside of the District, in Peterborough, Nottingham or even London. Therefore the employment profile does not necessarily reflect the structure of the economy.

6.1.3 The relevant Draft Objectives of the LDF are:

- To make provision for an adequate supply and choice of land for new housing, employment and other necessary development to meet the need of the district for the year 2021, in accordance with the requirements of the Structure Plan and the RSS
- To improve accessibility to jobs, houses and services, and to reduce traffic growth by ensuring choice to use public transport, or walk or cycle for as many journeys as possible
- To broaden and diversify the employment base of the district by: identifying development opportunities for specific employment sectors within Grantham Stamford, Bourne and the Deepings; ensuring an adequate and appropriate supply of premises and land; increasing inward investment; and encouraging appropriate employment and diversification schemes to assist the rural economy

6.2 Employment Baseline in South Kesteven

6.2.1 South Kesteven is better placed than most other parts of Lincolnshire to attract and benefit from new employment development. The district currently has a low unemployment rate, however average incomes are distorted by very high incomes of those commuting out of the district. Much of the employment within the district is low paid and skill levels tend to be lower than national average.

6.2.2 According to midyear population estimates (National Statistics, 2004) there are a total of 76,900 people of working age in South Kesteven (60.2% of the total population). Of the total of people working, 69.4% are employees, and 8.5% are self-employed. Unemployment is 3%, somewhat lower than the

England & Wales average of 4.8%.

6.2.3 Of the people in South Kesteven who were of working age (16 to 64 for men or 16 to 59 for women) the employment rate was 79 per cent (June to August 2004), compared with an average for Great Britain of 75 per cent. (Source: NOMIS Official Labour Market Statistics)

6.2.4 Table 6.1 shows the distribution of employment by occupation within the District. It is striking that South Kesteven has a relatively high proportion of managers and senior officials in the workforce. Presumably these include many people who commute out of the District to work. People working in administrative and elementary occupations are also proportionately greater in number than the East Midlands and national average.

Table 6.1: Employment by occupation (2005)

Type	South Kesteven		East Midlands	Great Britain
Managers and senior officials	10,100	15.8%	15.3%	14.9%
Professional occupations	6,500	10.2%	11.0%	12.6%
Associate professional and technical	8,700	13.6%	12.5%	14.0%
Administrative and secretarial	8,900	14.0%	11.3%	12.6%
Skilled trades occupations	7,000	10.9%	12.2%	11.2%
Personal services occupations	3,900	6.1%	7.9%	7.7%
Sales and customer services occupations	4,900	7.7%	7.7%	7.8%
Processing plant and machine operatives	5,500	8.6%	9.3%	7.5%
Elementary occupations	8,100	12.8%	12.7%	11.5%

Source: NOMIS / National Statistics

6.2.5 There are 46 large employers in South Kesteven each employing more than one hundred people. (Source: SKDC)

6.3 Context Review

6.3.1 The context review undertaken by the Council is detailed in the SEA / SA Scoping Report. The key findings are listed below:

Key Messages from the Context Review	Evidence Source
Concentrate development in the four towns which are the most accessible areas so that employment opportunities within the town are accessible to the wider district population through public transport	PPG4 Industrial, commercial development and small firms; PPS7 Sustainable Development in Rural Areas

Flood risk could constrain further growth particularly in and around Market Deeping and Bourne Part of this area is in Zone 2 so is liable to a 'moderate' chance of flooding	PPG25 Development and Flood Risk
Reduce unemployment and increase local prosperity. however some employment types may be intrinsically unsustainable	RSS8, Regional Economic Strategy for the East Midlands 2003-2010, Lincolnshire Structure Plan

6.4 Likely future conditions

- 6.4.1 It is assumed that the proportion of people travelling to work in locations outside South Kesteven is expected to rise. This assumption is based on the stated objective for the LDF of diversifying the range of employment on offer within the District.
- 6.4.2 Employment in the agricultural sector is already very low (see Chapter 5, Table 5.1. Mechanisation has reduced the employment potential of this sector in recent decades and this is unlikely to change in the future. Presently, seasonal labour requirements appear to be filled by migrant workers.

6.5 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

- 6.5.1 There is a risk this option may detract from economic investment in rural areas with consequent adverse employment effects. The option restricts economic development to traditional rural enterprise (agriculture, forestry and equine uses) and services, or "*rural diversification projects with proven need*". One of the LDF objectives is to diversify the employment base and it is possible that this could be facilitated by removing the phrase 'with proven need' from this option.

Preferred Option 3: Economic Development Provision

- 6.5.2 This option states that employment land allocations will be based on the findings of the Employment Land Review. This is not currently available but it is assumed that this will provide a robust assessment of the District's employment land needs. The option is therefore assessed as beneficial although it is not possible to say whether this will be a significant effect.

Preferred Option 12: Reducing the risk of flooding and protecting water resources

- 6.5.3 This option could constrain development in the South East of the District, particularly in and around Market Deeping and Bourne, which are identified as possible sites for new development. The appraisal of the Housing and Employment Allocations Preferred Options will examine this in more detail,

however it seems unlikely to be a significant constraint in employment terms because Preferred Option 1 allows for development "*in support of the role of the three market towns*" only. This suggests any new employment development will be very limited.

6.6 Proposed mitigation measures

6.6.1 There may be a case for removing the phrase "*with proven need*" from the sub-clause in Preferred Option 12, dealing with rural diversification projects.

6.7 Proposed monitoring

6.7.1 It is suggested that the following indicators are incorporated in the Monitoring Framework:

- Economically active people of working age (available from NOMIS)
- Employment by occupation (available from National Statistics)

7 TRANSPORT

7.1 Introduction

7.1.1 Sustainable transport is key to the wider sustainable development agenda. An efficient transport network is a pre-requisite of a successful, modern economy. A safe and accessible transport network helps fulfil society's social objectives, while a low-pollution transport network is essential to safeguard the environment and climate. Reconciling these, often conflicting, requirements is at the heart of the planning process.

7.1.2 This chapter explores the likely effects of the Core Strategy Preferred Options on transport.

7.2 Transport Baseline in South Kesteven

7.2.1 Lincolnshire's highway network is extensive totalling some 9018 kilometres (5605 miles), making it the 5th longest of any English highway authority. Within this network there is no motorway and just 66km of dual carriageway, largely confined to the A1 Great North Road and the A46 between Newark and Lincoln. The road network is essentially single carriageway and some 80% of Lincolnshire's roads are Category 'C', or not classified at all. (Source: Lincolnshire Local Transport Plan)

Table 7.1: Lincolnshire highway network

Classification	Length (km)	Length (miles)
Trunk roads	58	36
Principal (A) roads	1042	648
B roads	786	489
C roads	2916	1812
Unclassified roads	4216	2620
TOTAL	9018	5602

Source: Lincolnshire LTP

7.2.2 South Kesteven is somewhat more accessible by road than other Districts in Lincolnshire and since the A1 passes through the western side of the District, the proportion of dual carriageway is relatively high.

7.2.3 Similarly the District is more accessible by rail than other parts of the county. The East Coast Mainline passes through Grantham. Indeed many South Kesteven residents commute to London either directly from Grantham or via Peterborough to work.

7.3 Context Review

7.3.1 The key messages from the context review in the Scoping Report include:

Key Messages from the Context Review	Evidence Source
The majority of the Strategic Road Network falls well below current design standards with consequential low speeds and safety problems	Lincolnshire Local Transport Plan
Community Travel Zones, to reduce the number of short distance car trips made in the larger urban areas of Lincolnshire by promoting walking, cycling and public transport use, identified for investigation in Grantham East, Grantham South and Grantham North	Lincolnshire Local Transport Plan
Address road safety issues; develop rural transport services; market transport services and environmentally friendly forms of transport; promote the development of travel plans	Community Strategy: South Kesteven Local Strategic Partnership

7.4 Likely future conditions

7.4.3 The Lincolnshire Structure Plan seeks to provide 55,000 new dwellings between 2001 and 2021, more than 9,000 of these are planned for South Kesteven. Inevitably population growth will result in increased demand for travel. In particular, given the rural nature of the District, there are likely to be more car owners and drivers.

7.4.4 Furthermore an aging population will see a growing number of elderly people seeking to access services. This is likely to mean a need for transport that caters for older people who may not be able to drive and would rely on public transport to get around.

7.5 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

7.5.1 The sequential approach set out in the option suggests the relative importance of Grantham within the District is likely to grow. Only "modest" levels of development are anticipated for the market towns of Stamford, Bourne and the Deepings. This represents a significant change from the policy in the current Local Plan, which provided for substantial new development at Bourne (in particular) between 1990-2001.

7.5.2 Given that most of the new housing between 2001-2021 will be in Grantham there are likely to be significant additional demands on the local transport infrastructure and a probable increase in congestion in the town centre in the absence of other measures.

Preferred Option 2: Sustainable Integrated Transport

- 7.5.3 It is to be hoped that this option will address some of the problems of growth across the District and in Grantham in particular. Indeed many of the measures proposed, such as co-location of residential development with employment, service and retail land uses, should be beneficial in these terms. However the measures proposed are permissive rather than coercive and past experience suggests that, without steps to curb the use of the private car – without the “carrot and stick” approach – traffic on the roads is likely to continue to rise remorselessly, as it has for decades.
- 7.5.4 A particular flaw in the Preferred Option is the clause that encourages a sustainable transport network by “*locating development in areas which are accessible by the motor car, public transport, cycling and walking*”. This suggests the Council would accept development proposals that encourage access by car, which is contrary to the stated aim of the option. It is recommended that this option is reviewed and that access by car is not treated as a consideration in favour of proposals, other than in rural areas where other means of access are impractical. As it stands, the Preferred Option is not likely to have a significant effect in terms of reducing traffic growth.
- 7.5.5 It is noted that this option also makes no mention of equestrian means of transport. Clearly this is not an appropriate transport mode in urban areas, however the Council could consider making reference to the needs of equestrians in the Preferred Option.

Preferred Option 3: Economic Development

- 7.5.6 This option gives encouragement to mixed-use development, which should assist in reducing the distance that people travel to work, although the effect is likely to be marginal within South Kesteven alone. However, taken cumulatively with similar measures proposed by authorities, there could be a significant UK-wide impact on the annual average distance travelled to work over the long-term.

Preferred Option 4: Residential Development

- 7.5.7 The Preferred Option allows for 9,200 new dwellings in the period to 2021, which represents a very substantial increase in population and a correspondingly large increase in demand for travel. However development is clearly focussed on Grantham in the first instance and on the three market towns thereafter. Development in the villages and open countryside is to be exceptional.
- 7.5.8 Existing policy in the current Local Plan allowed for up to 3,375 dwellings between 1990 and 2001 in areas outside of Grantham, Stamford, Bourne and the Deepings. Development in the countryside will be on nothing like

this scale in future and, while this will do nothing to change what has gone before, this option represents a significant change in policy and will probably bring about a similarly significant cut in the rising trend of rural traffic between now and the early 2020s.

7.6 Proposed mitigation measures

- 7.6.1 A Master Planning exercise is currently under way which will feed into the Grantham Area Action Plan (AAP) in due course. Opportunities to reduce congestion from new development should be sought in this AAP.
- 7.6.2 It is proposed that Preferred Option 2, Sustainable Integrated Transport, is reviewed and that access by car is not treated as a consideration in favour of proposals, other than in rural areas where other means of access are impractical. The relevant portion of the option might read: *“a) locating development in areas which are accessible by sustainable transport means, such as public transport, cycling or walking, and additionally accessible by car in rural areas”*.
- 7.6.3 Consideration might also be given to the needs of equestrians in Preferred Option 2.

7.7 Proposed monitoring

- 7.7.1 The following contextual indicators are proposed as part of the Monitoring Framework:
- Modal split of journeys within the District
 - Proportion of people commuting to work outside the District
 - Distance travelled annual by private car within the District

8 CRIME AND SAFETY

8.1 Introduction

8.1.1 Safe, healthy and vibrant neighbourhoods are fundamental to the economic, social and environmental well-being of the community. This chapter investigates the current and likely future situation in terms of crime and public safety in South Kesteven and how the Core Strategy Preferred Options might influence crime and safety in future.

8.2 Crime Baseline in South Kesteven

8.2.1 The Council is a member of the Crime and Disorder Partnership, formed in 1998 as required by the Crime and Disorder Act. The objective of the partnership is to make South Kesteven a safe place to work and live. Crime audits show that the District has near to or lower than average crime figures than the rest of Lincolnshire.

Table: Total offences and offences per thousand population

Period	South Kesteven		Lincolnshire	England & Wales
	Total number of offences	Offences per 1000 population	Offences per 1000 population	Offences per 1000 population
Apr-Jun 2003	2,700	21.5	23.5	29.0
Jul-Sep 2003	2,811	22.4	24.5	28.3
Oct-Dec 2003	2,693	21.4	21.6	27.6
Jan-Mar 2004	2,574	20.5	22.4	27.8

Source: www.crimestatistics.org.uk

8.2.2 The six key offences identified are:

- Violence against the person
- Sexual offences
- Robbery
- Burglary of a dwelling
- Theft of a motor vehicle
- Theft from a motor vehicle

8.3 Context Review

8.3.1 The key messages from the context review in the Scoping Report include:

Key Messages from the Context Review	Evidence Source
Reduce the incidence of and opportunity for crime and disorder and thereby improve the quality of life and individual awareness within the district in partnership with the community	Crime and Disorder Strategy and Implementation Plan: 2002-2005 - South Kesteven Crime and Disorder Partnership

8.4 Likely future conditions

8.4.1 Crime itself – as opposed to fear of crime – has fallen in recent years. While there is a certain irreducible level below which crime cannot fall, it is not clear whether this level has yet been reached. It seems reasonable to assume that crime will not rise in the foreseeable future even if it falls no further, assuming other factors, such as the state of the economy, remain the same.

8.5 Likely significant effects of the Core Strategy Preferred Options

8.5.1 The Core Strategy Preferred Options are not likely to have any significant effects on crime in the District. However it is worth noting that Preferred Option 7 stresses the use of design to minimise crime. This aspect of the option needs to be fully developed in appropriate documents, such as Design Codes, Master Plans or Planning Conditions relating to new development.

8.6 Proposed mitigation measures

8.6.1 None proposed.

8.7 Proposed monitoring

8.7.1 It is proposed that the following form part of the Monitoring Framework:

- Violence against the person
- Sexual offences
- Robbery
- Burglary of a dwelling
- Theft of a motor vehicle
- Theft from a motor vehicle

9 HOUSING

9.1 Introduction

9.1.1 The population of South Kesteven has been growing steadily in recent decades. Much of this population growth results from people moving into the District, attracted by the pleasant surroundings, relatively low house prices and good transport links to London, Peterborough and Nottingham. The population is expected grow similarly in future (see Chapter 3, above).

9.1.2 South Kesteven needs to provide for additional housing to meet the needs of the growing population.

9.2 Housing Baseline in South Kesteven

9.2.1 The table below shows the number of houses owned by the Council. It can be seen that the total stock owned by the Council is declining.

Table 9.1: South Kesteven Housing Stock (1995-2005)

1995	1997	1999	2001	2003	2005
7,954	7,778	7,412	7,182	6,793	6,483

Source: ODPM

9.2.2 At the same time the average (mean) price of a house is rising. This is shown in the table below. Note that this refers to the average of all houses, regardless of type or number of bedrooms.

Table 9.2: Housing market - mean house prices in South Kesteven

1996	1997	1998	1999	2000	2001	2002	2003	2004
59,848	64,799	68,838	75,711	84,533	95,811	117,900	140,267	162,700

Source: ODPM (based on Land Registry data)

9.2.3 The South Kesteven Housing Needs Study Report (February 2006) found:

- 76.5% of households are owner-occupiers
- 13.7% are socially rented
- 92.2% of all households live in houses
- Approximately a quarter of all households contain a pensioner
- Another quarter contain a child

Table 9.3: South Kesteven number of households in each tenure group

Tenure	Number of households	Percentage of total
Owner-occupied (no mortgage)	16,632	30.8%
Owner-occupied (with mortgage)	24,677	45.7%
Council	6,359	8.6%
RSL	1,033	1.9%
Private rented	5,299	9.8%
Total	54,000	100.0%

Source: Housing Needs Study Report February 2006

9.2.4 The Housing Needs Study concluded that there is a significant shortfall of affordable housing for all sizes of accommodation, most notably two and three bedroom homes. The analysis also shows a surplus in the private rented sector. The owner-occupier sector is better served, except for a large shortfall of two bedroom homes.

Table 9.4: South Kesteven shortfall of dwellings in each tenure group

Tenure	1 bedroom	2 bedrooms	3 bedrooms	4+ bedrooms	Total
Owner-occupation	76	335	44	134	588
Affordable housing	94	347	178	22	640
Private rented	(-160)	(-134)	(-141)	(-14)	(-396)
Total	64	547	80	142	833

Source: Housing Needs Study Report February 2006

9.2.5 The Housing Needs Study (February 2006) for the District found:

- A total of 48,770 dwellings
- 1,129 vacant dwellings
- 60.7% of dwellings built after 1964
- 1,306 dwellings unfit for human habitation
- 5,062 dwellings estimated to be 'fit but defective'

9.2.6 The Housing Needs Study estimates 17.9% of households in South Kesteven have one or more members in an identified special needs group. This is above the national average of 11-13%. The Study also found 59.6% of frail elderly households are single person households. It also shows they are more likely to live in rural or Bourne sub-areas.

Table 9.5: South Kesteven shortfall of dwellings in each tenure group

Number of persons in household	Special needs	No special needs	Number of households	Percentage of total households with special needs
One	3,578	10,423	14,001	25.6
Two	3,755	16,519	20,274	18.5
Three	994	7,588	8,582	11.6
Four	714	7,153	7,867	9.1
Five	420	2,033	2,453	17.1
Six +	187	537	824	22.7

Source: Housing Needs Study Report (February 2006)

9.3 Context Review

9.3.1 The following key messages are taken from the context review in the Scoping Report and the Local Plan:

Key Messages from the Context Review	Evidence Source
Prioritise the re-use of previously-developed land (including empty buildings and conversions) within urban areas, in preference to greenfield sites	PPG3 Housing
Make more efficient use of land by reviewing planning policies and standards. Provide greater choice and a better mix in the size, type and location of housing	PPG3 Housing
Plan to meet the housing requirements of the whole community, including those in need of affordable and special needs housing	PPG3 Housing
60% of additional housing to be provided on previously developed land or through conversions	PPG3 Housing
9,200 new homes required in the period 2001-2021	Lincolnshire Structure Plan
Expected to allocate the District a similar number of houses as the Structure Plan	RSS8: East Midlands Regional Spatial Strategy
To achieve a more balanced housing market To provide choice in accommodation type and location To ensure high standards of both public and private housing	South Kesteven District Council Housing Strategy

9.4 Likely future conditions

9.4.1 At present the District has an allocation of 9,200 houses to be built between 2001 and 2021. These break down as follows (Source: SKDC Issues and

Options Report, 2005):

- 2,440 already built
- 4,535 already have planning permission
- 2,223 remain to be allocated as part of the Local Development Framework

9.4.2 House prices have demonstrated a long-term rising trend. It is likely that this will continue in future, although peaks and troughs in the housing market are to be expected. Affordability is likely to remain a problem.

9.5 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

9.5.1 The sequential approach will ensure that new housing development will be focussed in the sub-regional centre of Grantham. Brownfield sites will be a priority location for housing developments. Housing development is not currently planned for the three market towns or rural areas. Once these sites have been exhausted housing will be located in an urban extension of Grantham.

9.5.2 This option will make the most efficient use of land available for housing. However it is possible that there will be a demand for market housing in some smaller towns and villages. While this would help maintain balanced growth in the District, the Lincolnshire Structure Plan currently prevents the Council from permitting this. There is a clause permitting rural exceptions for affordable housing but no significant effects are likely to arise from such small-scale developments.

Preferred Option 4: Residential Development

9.5.3 The current housing requirements for the district are 9,200 dwellings for the period 2001-2021. This Preferred Option identified the possible need for a Greenfield urban extension of 600 additional dwellings. It is likely that the District will meet the housing targets without the urban extension and any need that does arise is likely to be towards the end of the plan period.

Preferred Option 5: Providing for Affordable Housing

9.5.4 The option proposes a high percentage of affordable housing in order to maximise the total number that will be built in the District. There is a balance to be struck between the demand for affordable housing that clearly exists within the District and the ability of developers to build houses at a reasonable profit. It is possible that the 50% affordability requirement may discourage development in the future, thereby threatening both the overall delivery of housing in general and affordable housing in particular.

Preferred Option12: Reducing the risk of flooding and protecting water resources

9.5.5 This Preferred Option discourages inappropriate development in fluvial floodplain areas as well as any development that may have a detrimental effect on river and stream corridors, ponds or wetland habitats. In the long term this could limit the amount land with development potential given that the land around Bourne appears to be an area of significant flood risk. However the sequential approach outlined in Preferred Option 1 means that housing development in Bourne is unlikely in the plan period.

9.6 Proposed mitigation measures

9.6.1 None proposed.

9.7 Proposed monitoring

9.7.1 The following indicators are suggested as part of the Monitoring Framework:

- Housing completions
- Affordable housing completions
- Average house prices
- Housing given planning permission on floodplains
- Housing built on previously developed land

10 CULTURAL HERITAGE

10.1 Introduction

10.1.1 This chapter aims to assess the effects of South Kesteven's Core Strategy Preferred Options on its cultural heritage.

10.1.2 The UNESCO World Heritage Convention (1972) defines the scope for what is considered "cultural heritage" as follows:

- **Monuments:** architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- **Groups of buildings:** groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- **Sites:** works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

10.1.3 Preserving the cultural and historic environment benefits communities in more than one way: it provides an essential educational resource for the understanding of the past and its legacy; it contributes to the national and local economy as it promotes tourism and provides jobs; it provides people with a sense of belonging to a unique and special place – a sense of identity.

10.2 Legislation

10.2.1 The main international conventions, EU Directives and UK legislation relating to climate change are as follows:

- **World Heritage Convention 1972:** adopted by UNESCO in 1972 and ratified by the UK in 1984 – came as a response to the increase loss and degradation of cultural heritage.
- **Ancient Monuments and Archaeological Areas Act 1979:** provides for nationally important archaeological sites to be statutorily protected as "scheduled ancient monuments" (now Scheduled Monuments)
- **National Heritage Act 1983:** set up English Heritage aimed at protecting England's historical, architectural and archaeological heritage
- **National Heritage Act 2002:** Broadens the powers of English Heritage in several ways including involvement in underwater archaeology.

10.3 Baseline

10.3.1 According to South Kesteven’s Cultural Strategy, Grantham “*does not possess a nationally important built heritage*”. It nevertheless contains a number of Scheduled Monuments and Listed Buildings that are designated at the national level and need to be taken into consideration. Data on the condition of these is not easy to come by.

10.3.2 Urban areas of the District also contain a number of Conservation Areas of distinctive architectural character that are given some protection from inappropriate development by the Council. The Stamford Conservation Area, designated in 1967, was the UK's first Conservation Area.

10.4 Context Review

10.4.1 The findings of the Context Review from the Scoping Report are reproduced here:

Key messages from the context review	Evidence source
To respond to public interest in the historic environment with [...] a sound knowledge base from which to develop policies	The Historic Environment: A Force for Our Future (2001) - Department for Culture, Media and Sport
To realise the full potential of the historic environment as a learning resource.	The Historic Environment: A Force for Our Future (2001) - Department for Culture, Media and Sport
To make the historic environment accessible to everyone and ensure that it is seen as something with which the whole of society can identify and engage.	The Historic Environment: A Force for Our Future (2001) - Department for Culture, Media and Sport
To ensure that the historic environment’s importance as an economic asset is skilfully harnessed.	The Historic Environment: A Force for Our Future (2001) - Department for Culture, Media and Sport

10.5 Likely future conditions

10.5.1 Cultural heritage is nevertheless fragile and subject to a number of threats such as pollution, weather and climate, and use or abuse by the public. Such threats conflict with the general aim of preserving this heritage and making it more accessible and part of everyone’s life. Given the limited amount of baseline data available it is difficult to predict the likely future condition of cultural assets in South Kesteven

10.6 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

10.6.1 With development in South Kesteven focussed mainly in Grantham, it is likely that the town will experience a significant increase in traffic and therefore also in traffic-generated pollution. This is likely to be locally

significant. This may have a detrimental impact on the fabric of older buildings and structures and is likely to also affect their setting.

Preferred Option 6: Protection and Enhancement of the Character of the District

10.6.2 While clearly beneficial, this option is not likely to make a significant difference to the preservation of cultural heritage. This is because the option is essentially the same as the existing policy in the Local Plan (policies EN3, EN4 and EN6).

Preferred Option 7: Design

10.6.3 The Preferred Option is again positive and may have additional benefits as compared to EN1 of the Local Plan. However it is difficult to be certain how significant these benefits might be.

Preferred Option 9: Development in Conservation Areas

10.6.4 This option strengthens the approach put forward in the Local Plan as it states that removal of features that contribute to the character of the area – such as hedgerows, boundary walls, or trees – “*will not be acceptable*”. This compares with the policy in the Local Plan, EN1, which aims “*to conserve and enhance wherever possible, woodland, trees, hedgerows ... [...] and features of heritage significance*”. For this reason the Preferred Option is assessed as having a significantly beneficial effect on cultural heritage assets.

Preferred Options 10 and 11: Listed Buildings; Archaeological and Historic Sites

10.6.5 Both of these options mention that the Council will protect Listed Buildings and archaeological and historic sites. While they add to the protection set out in national planning policies (PPG15 and PPG16), they do not significantly change the local policy context as set out in the Local Plan.

10.7 Proposed mitigation measures

10.7.1 No mitigation is proposed. Although the Preferred Options by and large do not significantly change planning policy in relation to cultural heritage, they do, nevertheless, contribute an appropriate level of protection to the District’s heritage assets.

10.8 Proposed monitoring

10.8.1 None proposed.

11 CLIMATE

11.1 Introduction

- 11.1.1 Throughout the lifetime of the planet the Earth's climate has varied in response to natural cycles and events. However in recent decades evidence has accumulated to demonstrate that an unprecedented rise in global temperatures has occurred over the last century or so. Scientific opinion is now virtually unanimous in attributing this change to emissions of greenhouse gases, primarily carbon dioxide from combustion for energy generation or transport.
- 11.1.2 Other greenhouse gases now present in the atmosphere include methane from fossil fuels and landfill waste, nitrous oxide from fertilisers and industrial processes, chlorofluorocarbons and hydrochlorofluorocarbons from coolants and sulphur hexafluoride from dielectric fluid. These gases are found in far smaller quantities in the atmosphere than carbon dioxide but have much greater 'global warming potential', or volume-for-volume cause more warming than carbon dioxide.
- 11.1.3 The global temperature is increasing and is predicted to continue to do so unless greenhouse gas emissions are brought under control and reduced. However the global climate reacts slowly and some climate change is now inevitable in response to historic emissions. The impacts of climate change are expected to be warmer, wetter winters, hotter, drier summers. Sea levels are expected to rise and, together with an increase in rainfall, lead to more frequent flooding of rivers and the coastline. Extreme weather events such as storms or heat waves would be more frequent.
- 11.1.4 These impacts would likely have a number of indirect effects. These would include changes in the availability and quality of water resources, damage to native habitats and migration or extinction of native plants and animals. Infrastructure and buildings could be damaged more frequently by storms. The economy would change and agriculture in particular would be forced to adapt to the new climate, with new crops replacing traditional varieties. Similarly, unfamiliar diseases might become commonplace in a warmer climate, and patterns of mortality would change with, for instance, fewer premature deaths in winter from cold but probably more deaths from higher temperatures in the summer.

11.2 Legislation

- 11.2.1 The main international conventions, EU Directives and UK legislation relating to climate change are as follows:
- **UN Framework Convention on Climate Change (1992)** - sets an overall framework for intergovernmental efforts to tackle the challenge

posed by climate change

- **Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997)** - commits the UK to an 8% cut in emissions of greenhouse gases by 2008-12
- **UK Climate Change Programme (2000)** - domestic goal to cut carbon dioxide emissions by 20% below 1990 levels by 2010
- **The Sixth Environmental Action Programme Environment 2010: Our Future Our Choice (2001)** - ratification of Kyoto Protocol as the first step to the achievement of a 70% cut in greenhouse gas emissions
- **Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community (2003)**
- **Energy White Paper (2003)** - UK should put itself on a path towards a reduction in carbon dioxide emissions of some 60% by 2050
- **Review of the UK Climate Change Programme (2004)** - currently in consultation; examines the future direction of climate change policy
- **PPS22 Renewable Energy (2004)** - sets a target of 10% proportion of energy generated from renewable sources by 2010
- **Securing the Future: UK Government sustainable development strategy (2005)** - climate change is the "greatest threat" facing the UK and a profound change in energy use is required

11.3 Baseline

11.3.1 A recent report commissioned by the Department for Environment, Food and Rural Affairs² estimates that 1,286,000 tonnes of carbon dioxide were emitted from the District in 2003. Although the report makes clear that these figures should be treated with caution because they contain many assumptions, they do give an indication of the District's contribution to global warming.

Table 11.1: Indicative Estimates of Carbon Dioxide Emissions in 2003 (tonnes)

Authority	Estimated Emissions	Population (2001)	Emissions Per Capita
Boston	564,000	55,750	10.12
East Lindsey	1,409,000	130,447	10.80
Lincoln	609,000	85,595	7.11
North Kesteven	913,000	94,024	9.71
South Holland	902,000	76,522	11.78
South Kesteven	1,286,000	124,792	10.31

² Local and Regional CO₂ Emissions Estimates for 2003, DTI (2005)

West Lindsey	974,000	79,515	12.25
North East Lincolnshire	1,922,000	157,979	12.17
North Lincolnshire	13,999,000*	152,849	91.58

Source: DEFRA

*Note that this apparently anomalous figure is a result of emissions from the Scunthorpe steelworks

11.3.2 National emissions of greenhouse gases have been estimated and are shown below:

Table 11.2: Estimates of UK Greenhouse Gas Emissions (thousands of tonnes)

1990	1991	1992	1993	1994	1995	1996
786,293	792,500	771,321	753,224	743,717	737,000	764,367
1997	1998	1999	2000	2001	2002	2003
746,435	745,202	713,233	716,689	733,085	711,207	722,328

Source: ONS

11.3.3 The UK trend is downwards, although the most recent figures show a slight increase. The decrease is attributed to improvements in domestic and industrial energy efficiency and the substitution of coal for gas in the generation of energy.

11.3.4 Emissions of greenhouse gases from road transport sources have been rising throughout the same period. Given that little energy is generated in the District and most of the emissions are from transport, it is likely that emissions in South Kesteven follow a different trend and are proportionately higher than the UK average.

11.4 Context Review

11.4.1 The key messages of the context review include:

Key Messages from the Context Review	Evidence Source
Improve the energy efficiency of business	UK Climate Change Programme
Stimulate the provision of more efficient and renewable sources of energy	UK Climate Change Programme; PPS22
Cut emissions of greenhouse gases, especially from the transport sector	UK Climate Change Programme; Securing the Future
Promote better domestic energy efficiency	UK Climate Change Programme
Prepare for the expected impacts of unavoidable climate change, developing adaptation responses	UK Climate Change Programme; Securing the Future

Continue to encourage the fall in emissions from agriculture and forestry	UK Climate Change Programme
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11.5 Likely future conditions

- 11.5.1 Predicting the likely future condition of the climate in the absence of the South Kesteven Core Strategy is extremely difficult for a number of reasons. There is considerable uncertainty about the magnitude of climate change effects. What seems certain is that the climate in the District and the UK will change as a result of global climate change. The sooner action is taken to reduce emissions the smaller the eventual change in the climate will be; but there will nevertheless be changes.
- 11.5.2 However this action needs to be global in scale. The International Energy Agency³ estimates that, on current trends, global emissions of carbon dioxide will increase 52% by 2030. If such a prediction turns out to be correct then the climate of the District at the end of the century is likely to be radically different than it is today.

11.6 Likely significant effects of the Core Strategy Preferred Options

- 11.6.1 In view of the above, it is tempting to think that the Core Strategy could have no significant effects on climate. It is true that greenhouse gas emissions elsewhere in the world will determine the future climate of the District regardless of any action taken or not taken by the Council. However, it remains the case that the Council has a role to play in the global action required to avert the most extreme effects of climate change. The following comments should be seen in this context and significance is judged in relation to past conditions in South Kesteven.

Preferred Option 1: Sequential Development in South Kesteven

- 11.6.2 The principal focus of this option is the sequential test for locating new development within the District. In terms of reducing emissions of greenhouse gases the location of development is only important insofar as it reduces the need to travel by unsustainable means.
- 11.6.3 However the location of development could be very important in terms of adapting to climate change. Development located in areas liable to flooding will be at increased risk in the medium to long term since the frequency and extent of flooding events are expected to increase as the climate warms. There may be a case for putting areas liable to flooding into the sequential list in last place in order to avoid such impacts in future (see also the comments on Preferred Option 12, below).

³ World Energy Outlook 2005, International Energy Agency (2005)

Preferred Option 6: Protection and Enhancement of the Character of the District

- 11.6.4 Indirectly this option may be beneficial in terms of adapting to the changing climate because it states: "*only development which is necessary and appropriate will be allowed within the open countryside*". Development in sites liable to flood in the open countryside would, presumably, not be considered appropriate.

Preferred Option 7: Design

- 11.6.5 Energy efficiency is a key theme of this option and future development could be significantly more sustainable by virtue of this. The effect on the global climate will obviously be insignificant but the option should be cumulatively beneficial.
- 11.6.6 The use of sustainable drainage systems is also promoted by this option. This is to be welcomed because it will help attenuate flooding events and thereby assist the District in adapting to climate change. The Council should consider strengthening the wording of the option to give "priority" rather than "consideration" to the features listed in new development.
- 11.6.7 The alternative of having no specific local design policy does not appear to offer the same degree of benefit either in terms of energy efficiency or in adapting to the changing climate, although national and regional policy does cover many of the same issues.

Preferred Option 12: Reducing the Risk of Flooding and Protecting Water Resources

- 11.6.8 The Preferred Option calls for flood risk assessment and necessary mitigation measures to be in place before development can be considered in areas at high (level three) risk of flooding. This is based on government planning policy set out in PPG25 (development and flood risk), which says that "*these areas may be suitable for residential, commercial and industrial development provided the appropriate minimum standard of flood defence (including suitable warning and evacuation procedures) can be maintained for the lifetime of the development*".
- 11.6.9 The Government is currently consulting on draft PPS25, to replace PPG25 in due course, which says "*a sequential approach to determining the suitability of land for development in flood risk areas is central to the guidance and should be applied at all levels of the planning process*". The draft guidance states that "*preference should be given to locating new development first to land in Flood Zone 1. If there is no reasonably available alternative site in Flood Zone 1, the flood vulnerability of the proposed development...can be taken into account in locating development in Flood*

Zone 2 and then Flood Zone 3".

11.6.10 This suggests that the Council's approach to managing the risk of flooding in new development is not sufficiently robust. While consistent with the current (PPG25) planning guidance, the Preferred Option does not set out the sequential test required by draft PPS25. For this reason the option is assessed as having a significantly adverse effect on adapting to climate change. It is recommended that the Council incorporate the sequential test into the option.

11.7 Proposed mitigation measures

11.7.1 The following mitigation measures are proposed:

- **Preferred Option 1** - the Council might consider the case for including areas liable to flooding into the sequential list, but placing them in last place in order to emphasise the growing importance of addressing flood risk as an impact of climate change
- **Preferred Option 7** - the Council should consider strengthening the wording of the option to give "priority" rather than "consideration" to the desirable features of new development, including energy efficiency and sustainable drainage
- **Preferred Option 7** - it is recommended that this option requires certification under a recognised sustainable building such as BREEAM / Ecohomes
- **Preferred Option 12** - it is recommended that the Council revisits this option to incorporate the sequential test set out in draft PPS25

11.8 Proposed monitoring

11.8.1 The following indicators are proposed as part of the Monitoring Framework:

- Emissions of greenhouse gases by source in the District
- Energy generated from renewable sources in the District
- Development in the floodplain
- Development incorporating Sustainable Urban Drainage Systems
- Number of homes or business flooded in the District

12 AIR

12.1 Introduction

- 12.1.1 Historically the main cause of poor air quality has been pollution from factories or coal burned for domestic heating. Smoke and sulphur dioxide from these sources resulted in serious public health problems in the major cities, notably in London where episodes of smog were infamous. By and large, thanks to regulation and technological changes, this source of pollution is no longer a problem in the UK, however poor air quality remains an issue.
- 12.1.2 Today traffic forms the principal source of pollution. Carbon monoxide (CO), oxides of nitrogen (NO_x), volatile organic compounds (VOC) and small particles (PM₁₀) are among the pollutants emitted from vehicle exhausts. These compounds can cause severe cardio-vascular and respiratory harm to people, especially in the long term, and also have adverse effects on the natural and built environment.
- 12.1.3 Once released into the atmosphere, NO_x and VOC pollutants undergo photochemical reactions resulting from the action of sunlight. This leads to the formation of ozone, which affects rural areas often far from the original source of pollution.

12.2 Legislation

- 12.2.1 The following are the main international conventions, EU Directives and UK legislation on air quality of relevance to the SA / SEA:
- **Council Directive 96/62/EC** on ambient air quality assessment and management (the 'Air Quality Framework Directive')
 - **Council Directive 1999/30/EC** relating to limit value for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (the first 'Daughter Directive')
 - **Directive 2000/69/EC** of the European Parliament and of the Council relating to limit values for benzene and carbon monoxide in ambient air (the second 'Daughter Directive')
 - **Directive 2002/3/EC** of the European Parliament and of the Council relating to ozone in ambient air (the third 'Daughter Directive')
 - **Directive 2004/107/EC** of the European Parliament and of the Council relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (the fourth 'Daughter Directive')
 - **Directive 2001/81/EC** of the European Parliament and the Council on national ceilings levels for atmospheric pollutants
 - **Working Together for Clean Air: the Air Quality Strategy for England, Scotland, Wales and Northern Ireland** (January 2000) and Addendum (February 2003)

12.3 Baseline

12.3.1 The Council continuously monitors some sixty sites where it is thought that ambient air quality might exceed the statutory air quality objectives defined in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland. Only one such site currently breaches the objectives for nitrogen dioxide and small particles. An Air Quality Management Area has been declared at this site.

Table 12.1: Air Quality Management Areas in South Kesteven

Air Quality Management Area	Pollutants Declared
An area of land including residential properties along Wharf Road, Grantham, Lincolnshire	Particulate Matter < 10 µm (PM ₁₀), Nitrogen dioxide (NO ₂)

Source: UK National Air Quality Information Archive

12.3.2 Air pollution from industry is regulated by the Council, which has a duty under the 1995 Environmental Protection Act. There are more than sixty potentially polluting industries in South Kesteven, including iron foundries, animal feed manufacturers, quarries and petrol filling stations. Several additional sites are regulated by the Environment Agency.

12.3.3 The South Kesteven Local Air Quality Management Progress Report (2004) gives the following data for nitrogen dioxide:

Table 12.2: Annual mean nitrogen dioxide concentrations ($\mu\text{g}/\text{m}^3$)

Location	2000	2001	2002	2003
All Saints Church	24.5	27.8	25.8	26.3
Avondale	24.0	24.9	26.5	23.2
Barnhill	22.2	24.6	23.0	23.6
Bus Station	-	53.3	49.5	49.2
Corner East Street	-	34.2	33.7	35.5
Essex Road	-	-	23.7	17.7
GT North CT	-	36.9	34.3	34.0
High Street	-	41.3	37.2	41.2
Hobart Road	-	19.5	16.3	19.1
Job Centre	-	30.4	29.1	28.1
Launder Terrace	-	25.2	27.2	23.0
London Inn	-	-	23.7	30.5
London Road	-	-	31.0	42.9
Meres Road	26.1	25.3	26.6	25.9
Meres Road 2	-	-	27.7	30.8
Opposite Asda	-	32.6	35.4	34.7
Opposite Stamford School	-	25.9	22.5	28.7
Premier Court (Church)	-	28.8	32.7	29.4
Premier Court (Nobody Inn)	-	30.8	33.7	29.9
Scotgate	40.3	38.5	40.3	35.2
South Parade	-	-	-	37.6
Springfield Road	-	-	27.5	28.6
St Helen's Close	-	-	22.3	18.4
Stamford School	40.3	36.6	37.2	35.4
Texaco	-	-	34.8	45.8
Troon	-	-	20.2	20.6
Wharf Road	-	45.8	45.9	45.7
Windrush	-	-	-	27.7

12.3.4 Table 12.2 shows that by 2003 the monitored concentrations of nitrogen dioxide were mostly below the statutory air quality objective of 40 µg/m³ (annual mean) that should be achieved by 31st December 2005. The Progress Report projected that four sites would exceed the statutory air quality objective in 2005:

- Bus Station
- Wharf Road
- London Road
- Texaco

12.3.5 The first two of these sites are within the declared Air Quality Management Area.

12.4 Context Review

12.4.1 The context review undertaken by the Council is detailed in the SA / SEA Scoping Report. The main findings relevant to air quality are reported below.

Key Messages from the Context Review	Evidence Source
The Core Strategy must consider the impact of potentially polluting development on land use	PPS23
The Core Strategy must comply with statutory environmental quality standards / objectives	PPS23
Targets set for key pollutants: benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, small particles (PM ₁₀)	Working Together for Clean Air: the Air Quality Strategy for England, Wales, Scotland and Northern Ireland
The Local Plan does not contain policies specifically related to air quality; there LDF should correct this omission	Local Air Quality Management – Progress Report (July 2004)
The Community Travel Zone Initiative aims to reduce the number of short distance car trips made in the larger urban areas of Lincolnshire by promoting walking, cycling and public transport use - the LDF should take account of this	Local Air Quality Management – Progress Report (July 2004)
The proposed Springfield Road mixed-use development site is highlighted as potentially having a significant impact on local air quality	Local Air Quality Management – Progress Report (July 2004)

12.5 Likely future conditions

12.5.1 The monitoring data shows that, while generally below the statutory air quality objective, the trend in annual mean nitrogen dioxide concentrations is rising in about half the instances measured. This mixed trend seems likely to continue in future because although improving engine technologies and cleaner fuels mean that the vehicle fleet is becoming cleaner, the number of vehicles on the road and the distances travelled are rising.

12.6 Likely significant effects of the Core Strategy Preferred Options

- 12.6.1 Development inevitably generates traffic, which will, in turn, lead to an increase in pollution. This would have the effect of causing a slight deterioration in the general air quality across the District, although this may not be measurable. Pollution from external sources is far more influential in determining background air quality in the District than pollution generated locally.
- 12.6.2 That said, locally generated pollution can be very important in causing 'hotspots', perhaps restricted to a single street that experiences high volumes of traffic. Therefore development proposals that increase the amount of traffic using a given road could affect local air quality and potentially hinder the achievement of statutory air quality objectives.
- 12.6.3 The Preferred Options below are those likely to have an impact on air quality. Options not discussed are not thought likely to affect air quality at all.

Preferred Option 1: Sequential Development in South Kesteven

- 12.6.4 Focussing development on Grantham is likely to make services more readily accessible than if development was dispersed more widely. This should mean fewer and / or shorter journeys and therefore smaller volumes of pollutants released to the atmosphere. However, if new development is located close to an area already experiencing poor air quality, there could still be locally adverse effects. These would be regarded as significant if such development caused statutory objectives to be exceeded.
- 12.6.5 The Core Strategy Preferred Options do not deal with proposed location of new development. This is an issue for the Housing and Economic DPD. The Council will need to have regard to the potential air quality impacts of new development in this DPD.
- 12.6.6 The option of extending the sequence approach to include sites within local service centres (larger villages) is likely to lead to more dispersed pattern of development. This would be expected to lessen the magnitude of any deterioration in local air quality in urban areas but the effect is unlikely to be significant given the small scale of development likely to be possible in villages.

Preferred Option 2: Sustainable Integrated Transport Policy

- 12.6.7 Insofar as the provision of alternatives means of transport assists in reducing the number of journeys made by car, this option is likely to be beneficial. However the actual impact of the option may be limited.

Guidance from the Department for Transport⁴ suggests that a package of measures to reduce car use is required. Provision of better public transport infrastructure is not likely to be sufficient.

- 12.6.8 Such a package of measures is the concern of Lincolnshire County Council and the Highways Agency, among others, and South Kesteven District Council does not have powers in this respect. The Council is recommended to urge these authorities to take measures to restrain the use of the car in appropriate locations in order to secure air quality benefits.

Preferred Option 3: Economic Development Provision

- 12.6.9 The effects of this option are likely to be similar to Preferred Option One, in that the total amount of pollution from traffic sources is likely to be limited if the distance travelled by people going to work is shorter. However this will not preclude the possibility of adverse effects on local air quality. Significant pollution impacts from industry itself are unlikely since the pollution control regulations are designed to prevent this.

- 12.6.10 However the Core Strategy Preferred Options do not deal with proposed location of new development. This is an issue for the Housing and Economic DPD. The Council will need to have regard to the potential air quality impacts of new development in this DPD.

Preferred Option 4: Residential Development

- 12.6.11 Given that it follows the sequential approach put forward in Preferred Option One, this option is likely to have similar effects on the air environment. The option is likely to reduce the need for people to travel by unsustainable means and would therefore be expected to be beneficial in terms of background air quality, although such benefits are not likely to be measurable. Again, the Council will need to bear in mind the possibility of adverse effects on local air quality when allocating sites.

- 12.6.12 This is an issue for the Housing and Economic DPD. The Council will need to have regard to the potential air quality impacts of new development in this DPD.

Preferred Option 7: Design

- 12.6.13 The aim of this option is to promote sustainable building techniques and specifically calls for the Council to promote development that gives consideration to energy efficiency, renewable energy generation on site and minimising pollution to air. Clearly therefore the option will benefit air quality, although the Council might consider strengthening the wording of the policy

⁴ Transport Analysis Guidance Unit 2.3,
http://www.webtag.org.uk/webdocuments/2_Project_Manager/3_Policy_Instruments/index.htm#1_5_5

to, for example, gives "*priority*" rather than "*consideration*" to the measures listed. The main impact of this option would be to reduce the overall demand for energy in South Kesteven, implying a reduction in polluting emissions from power stations.

12.6.14 The effect - an improvement in background air quality - will therefore be felt across the country as a whole and not simply in the District. The most important pollutant emitted from power generation is sulphur dioxide, released from the stacks of coal-fired plants. This gas is not a major component of pollution from traffic, the main source of pollution in South Kesteven.

12.6.15 The Lincolnshire Structure Plan allocates in excess of 2,000 new dwellings per annum to Lincolnshire as a whole but does not yet specify an allocation for South Kesteven. It allocates South Kesteven 9,200 new dwellings between 2001-2021, or 460 dwellings per annum. This gives an indication of the magnitude of the impact of this option.

12.6.16 The alternative approach, relying on policy in the RSS or PPG3, would probably not be as effective. The RSS calls for "*design and construction that minimises energy use, improves water efficiency, reduces waste and pollution, incorporates renewable energy technologies and sustainably sourced materials wherever possible*".

12.6.17 PPG3, government policy on housing, says that local authorities should "*promote the energy efficiency of new housing where possible*". However the draft version of the document soon to replace it, PPS3, merely states that "*local planning authorities should in particular encourage applicants to apply the 'Code for Sustainable Homes' for strategic sites that deliver a large number of new homes to improve resource efficiency and give purchasers and tenants information on the running costs and sustainability of their new home*". This would not appear to be as effective as the Preferred Option.

Preferred Option 8: Protecting Neighbourhood Amenity through Design

12.6.18 The prevention of "*an increase of dirt, dust, smoke, smell and other emissions which cause noxious and other fumes*" will obviously be beneficial in improving air quality, however this option is most likely to be applicable to industrial or similar land uses and these are generally covered by the pollution control regulations. The Preferred Option is therefore not likely to have a significant effect on air quality.

Preferred Option 15: Pollution Control

12.6.19 This Preferred Option would not be likely to have a significant effect on air quality. Although it specifically states that development that causes pollution

by "*toxic or offensive odour*" will not be permitted, the main thrust of the option is to control pollution from contaminated land. Furthermore emissions to air are anyway controlled by the pollution control regulations.

12.7 Proposed mitigation measures

12.7.1 The following mitigation measures are suggested:

- **Preferred Option 1** - the Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD
- **Preferred Option 2** - the Council is recommended to urge the Highways Agency and Lincolnshire County Council to take measures to restrain the use of the car where possible
- **Preferred Option 3** - the Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD
- **Preferred Option 4** - the Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD
- **Preferred Option 7** - the Council might consider strengthening the wording of the option to, for example, give "*priority*" rather than "*consideration*" to the measures listed

12.8 Proposed monitoring

12.8.1 The Monitoring Framework could include data from the Local Air Quality Management process, particularly where the monitoring sites are at locations with poor air quality, or where substantial increases in traffic are likely as a result of new development.

13 SOIL

13.1 Introduction

- 13.1.1 Land use patterns in the UK have been influenced by a variety of historical factors. Of particular relevance to the present chapter are the industrial revolution, which transformed the rural landscapes and the cities of Britain in the eighteenth and nineteenth centuries, as well more recent twentieth century developments.
- 13.1.2 The nature of soil contamination depends largely on the nature of the activity developed on a specific site. It is important to note that until the late 1970's, there was little legislation on this matter and it was common practice to dispose of materials on site or on landfills without much consideration for the potential impact on those sites and nearby areas.
- 13.1.3 Probably of greatest significance to South Kesteven, however, are the changes in agricultural practices, which have had significant impacts on land use patterns as well as soil quality and contamination. Modern intensive farming using artificial chemicals such as fertilisers and pesticides is very different to traditional approaches to farming. While crop yields have risen, this has not been without cost to the quality of the soil, treated as it typically is with phosphates or nitrates to enhance its productivity.

13.2 Legislation

- 13.2.1 The Environmental Protection Act (1990) defines contaminated land as:

“Any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that (a) Significant harm is being caused or there is a significant possibility of such harm being caused; or (b) Pollution of controlled waters is being, or is likely to be, caused”

- 13.2.2 Other relevant legislation includes:

- **Environment Act (1995)**
- **The Landfill Tax (Contaminated Land) Order 1996, SI 1529**
- **The Contaminated Land (England) Regulations 2000, SI 227**
- **The Waste Management Licensing (Amendment) (England) Regulations 2003, SI 595**

13.3 Baseline

- 13.3.1 There are many potentially contaminated sites in South Kesteven. These are shown in Map 15.

13.3.2 The Government has set a target that 60% of new housing development should be on Previously Developed Land of 60% by 2008. In South Kesteven the rate was 24% from 1996 to 1999 and 40% between 2000 and 2003. In 2004 / 05 the rate was 50% and, so far, in 2005 / 06 the rate is 52%. This shows a significant increase.

13.3.3 South Kesteven has very productive agricultural land, with much falling into the Department of the Environment, Food and Rural Affairs category of the 'best and most versatile' (Grade 1, 2 and 3a). The distribution of this land is shown in Maps 6-10.

13.4 Context Review

13.4.1 The following are the key messages from the Scoping Report:

Key Messages from the Context Review	Evidence Source
Integrate soil and land protection objectives in spatial planning strategies including promoting development on brownfield sites and clean up of contaminated land	EC Communication towards a thematic strategy for soil protection (2004)
Quantify diversity, quality and extent of soils to help develop strategies to eliminate threats to soil and promote sustainable land management	DEFRA Soil Protection Programme 2005
Draw up a scientific soil catalogue including nature of soil, contaminated areas, high value soils	EC Communication towards a thematic strategy for soil protection (2004)
To provide an improved system for the identification of land that is posing unacceptable risks to health or the environment and for securing remediation where necessary.	EPA 1990

13.5 Likely future conditions

13.5.1 Shortage of land for development is making the use of derelict and contaminated land much more common. It is likely that many of the remaining contaminated sites in South Kesteven will be remediated and made safe in the future as they are redeveloped.

13.5.2 This is likely, in turn, to contribute to the achievement of targets for new housing development on brownfield land; however, based on the trend over the last ten years, the 60% target is unlikely to be achieved locally by 2008. However future housing allocations should ensure that the target will be reached.

13.5.3 Significant change in the extent and quality of agricultural land is unlikely in future, if present trends continue. Current Local Plan policy opposes development in the open countryside beyond the boundary of existing rural settlements.

13.6 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

- 13.6.1 This sequential approach to development is likely to have a positive impact on the preservation of green areas and on “land recycling” as it aims to maximise development on previously developed land, minimising encroachment on green areas. This is likely to consequently achieve minimum loss of agricultural land, including areas of the ‘best and most versatile’ land.
- 13.6.2 This option is also likely to have a positive effect on the general state of brownfield land, as this will encourage the contamination assessment and clean up of brownfield land prior to its redevelopment. This is likely to have a positive general impact on land quality as it has been shown that it is in the outskirts of the main towns that the highest level of land contamination is found.
- 13.6.3 As Grantham is the proposed focus for new development under this option, the cleanup of contaminated land might be further enhanced as the town was the economic and industrial centre of South Kesteven during the Industrial Revolution and is likely to have proportionally more contaminated sites than the rest of the District.

Preferred Option 15: Pollution Control

- 13.6.4 This option states that development on contaminated sites will not be permitted unless effective measures are taken to treat, control or contain any contamination.
- 13.6.5 Although it puts forward the goal of restricting use of contaminated land, such restrictions are already well defined in pollution control legislation (such as the EPA 1990, Part IIA). This option is therefore unlikely to significantly alter the context for development on contaminated land, or the rules relating to development following remediation.

13.7 Proposed mitigation measures

- 13.7.1 None proposed.

13.8 Proposed monitoring

- 13.8.1 The following indicators are proposed as part of the Monitoring Framework:
- Percentage of development on brownfield sites
 - Percentage of contaminated land undergoing remediation as part of development

- Percentage of development on greenfield land
- Area of 'best and most versatile' agricultural land (Grade 1, 2 and 3a) lost to development

14 WATER

14.1 Introduction

- 14.1.1 About 97% of all of the water on the Earth is saltwater. Of the remaining three per cent that is fresh, most is currently frozen in the polar ice caps. Usable freshwater represents less than one per cent of the total globally: existing as groundwater in aquifers below the surface, or visible as streams, rivers and lakes.
- 14.1.2 Water is essential for all life, human as well as animal or plant, and it is important to treat water as the scarce resource it really is in order to minimise impact on the environment and human health. The efficient use of water, which takes into account its long-term availability and quality is an important factor in sustainable development.
- 14.1.3 Many activities have the potential to pollute water. Pollution may enter the water environment from a point source, for example effluent discharged from a pipe, or from a diffuse source, such as nitrates in rainwater runoff from agricultural land. Polluted water can be treated if it is contained; this, for instance, is what happens to sewage before it is released into the environment. Untreated pollutants can severely damage the natural environment and are a risk to human health.
- 14.1.4 Flooding is another important consideration in land-use planning. In England and Wales, around five million people live in areas at risk of flooding. Many floods are local, short-lived events that can happen suddenly, sometimes with little or no warning. They are usually caused by intense storms that produce more runoff than an area can store or a stream can carry within its normal channel. Urban areas, which have many hard surfaces that restrict drainage, are at increased risk of flooding.
- 14.1.5 In risk areas defence mechanisms can be put in place to control floods but these are costly and frequently merely transfer the problem to another location. Land use planning is essential for reducing flood risk, mainly by restricting development on high-risk areas and potentially maintain floodplains natural and undeveloped.

14.2 Legislation

- 14.2.1 The main international conventions, EU Directives and UK legislation relating to water quality and flood management (not including coastal and sea water) are as follows:
- **Environmental Protection Act 1990:** introduced Integrated Pollution Control (IPC) legislation, which controls authorisations from industry to air, land and water

- **Water Resources Act 1991:** deals with the control of pollution of “controlled” waters (essentially any ground or surface water body)
- **Protection of Water against Agricultural Nitrate Pollution (England and Wales) Regulations 1996, SI 888:** defines high-risk areas classified as “nitrate vulnerable zones”
- **Groundwater Regulations 1998:** impose the requirement to hold an authorisation to make discharges of certain pollutants to groundwater (this includes certain metals, biocides and cyanides)
- **Water Industry Act 1999 (and Water Industry Act 1991):** cover the control of the supply of water and provision of sewerage services by the water and sewerage undertakers
- **Pollution Prevention and Control Act 1999:** gradually replacing the 1990 IPC legislation with the broader Pollution Prevention and Control (PPC) regime
- **Water Framework Directive (2000):** essential piece of water legislation that requires all inland and coastal waters to reach “good status” by 2015, through demanding environmental objectives, including ecological targets for surface waters
- **Water Act 2003:** amends the Water Resources Act 1991 to, amongst other areas, improve water resources management in the context of abstraction and impounding

14.3 Baseline

- 14.3.1 Most of South Kesteven consists of agricultural farmland, which involves the regular use of fertilisers and pesticides. Fertilisers can have a major impact on surface and groundwater systems entering as a diffuse source and causing eutrophication (nutrient enrichment) leading to a lack of dissolved oxygen, as well as making water unfit for human consumption.
- 14.3.2 Most of South Kesteven has been classified as a Nitrate Vulnerable Zone (NVZ), meaning that it is land that drains into nitrate polluted waters, or is close to waters which could become polluted by nitrates. NVZ are classified as such when the waters exceed or are at risk of exceeding the EU limit of 50mg/NO₃/l. Samples taken from River Witham and River Glen between 2000 and 2006 do not exceed 31.5 mg/l and are usually below 15-20 mg/l.
- 14.3.3 River Quality is classified by the Environment Agency using the General Quality Assessment (GQA) scheme of which a brief explanation is given below. Each stretch of river is then given a grade ranging from A (very good) to F (bad).
- 14.3.4 The chemical GQA measures the following:
- Dissolved Oxygen – essential to aquatic life
 - Biochemical Oxygen Demand (BOD) – indicator of organic pollution
 - Ammonia – indicator of organic pollution

14.3.5 The biological GQA uses measurements of the presence of macro-invertebrates (such as insect larvae) which tend to be good indicators for the following reasons, as they:

- Can be seen with naked eye
 - Do not move far
 - Respond to water pollutants and to physical damage to the habitat
- Their condition can indicate the presence of infrequent or low concentrated pollutants, which may be missed in the chemical analysis.

14.3.6 The trend in GQA is shown by the graphs in Appendix 1.

14.4 Context Review

14.4.1 The key messages of the context review from the Scoping Report include:

Key Messages from the Context Review	Evidence Source
To improve the chemical quality and ecological status of surface waters	Water Framework Directive (2000)
To improve the chemical quality of groundwaters	Water Framework Directive (2000)
To protect water as a resource by promoting its adequate supply / use and make it part of a holistic land planning framework achieving water quality and the preservation of water resources (also minimising the impacts of events such as floods and droughts)	Water Framework Directive 2000 Water Act 2003 Water Industry Act 1999
More stringent and effective pollution control measures	Water Framework Directive Groundwater Regulations 1998 Water Resources Act 1991 EPA 1990
Flood risk must be properly taken into account in the planning process to reduce the future risk of flooding	PPG25
Broadly speaking, South Kesteven is currently adequately protected from flooding	Strategic Flood Risk Assessment (2004)

14.5 Likely future conditions

14.5.1 There has been a general trend towards improvement in the quality of surface waters over the last decade or so, following the introduction of various regulatory measures. This can be expected to continue as regulations tighten.

14.5.2 Water availability is a different matter. Water companies that supply the major growth areas in south east England are concerned that demand for water will outstrip the available supply in the coming decades. The situation in other areas, including South Kesteven, is less acute. However climate change is expected to lead to hotter, drier summers and warmer, wetter winters. It would be unwise to assume that water will always be as readily available as it is now.

14.5.3 Wetter winters would mean that floods would be more frequent and increasingly severe. This would need to be addressed by directing new development away from flood plains and by defending existing 'at risk' areas.

14.6 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

14.6.1 Under this option it is likely that Grantham will grow considerably, and this may have implications for infrastructure required for water supply and drainage. It is also important to note that the River Witham runs through Grantham. The town is not thought to be at risk of flooding, although flood risk assessments of new developments may be necessary.

14.6.2 Development elsewhere, in particular in Bourne, may be at significant risk of flooding. The appraisal of the Housing and Employment Allocations Preferred Options will examine this in more detail.

Preferred Option 7: Design

14.6.3 This option proposes that new development should give "*consideration*" to the use of sustainable drainage systems and/or permeable surfaces, which should have a positive impact on minimising flood risk as it may decrease run-off from urban areas. This may be locally significant in areas at high risk of flooding and for this reason it is proposed that the option should give "*priority*" to developments incorporating sustainable drainage systems.

14.6.4 Conversely, however, sustainable drainage systems can increase the risk of pollution of the water environment. These systems have many configurations and some discharge directly into controlled waters with minimal pollution abatement. In normal circumstances this is not a problem as the runoff is relatively benign. However should the runoff become polluted, there is a risk of significant damage to water quality, wildlife and human health.

Preferred Option 12: Reducing the Risk of Flooding and Protecting Water Resources

14.6.5 This option is positive and likely to assist in flood prevention, as it stipulates the need for flood risk assessments and adequate drainage and water supply. However, in practice it is not likely to represent a significant change to the existing situation since Local Plan policies and national policy (PPG25) already incorporate these requirements.

14.6.6 On the other hand, the Council proposes to resist "*development which is*

likely to have a detrimental impact on the natural features of river and stream corridors, ponds or wetland habitats...unless it can be demonstrated that mitigation measures are incorporated". This is an unhelpful formulation: either the development has a detrimental impact or it does not. As it stands, the option appears to sanction detrimental development provided some degree of mitigation is provided. It would be better for the option to ignore mitigation altogether and leave the developer to demonstrate no detrimental impact.

14.7 Proposed mitigation measures

14.7.1 Preferred Option 12 should be amended to read: "*development which is likely to have a detrimental impact on the natural features of river and stream corridors, ponds or wetland habitats will not be permitted*". This is less ambiguous.

14.8 Proposed monitoring

14.8.1 The following indicators are suggested as part of the Monitoring Framework:

- Chemical and biological water quality (available from the Environment Agency)
- Monitoring of groundwater for organic and inorganic pollutants
- Number of development permitted in areas at risk of flooding
- Number of flooding incidents

15 BIODIVERSITY

15.1 Introduction

15.1.1 Biodiversity is:

“The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”

(Convention on Biological Diversity (1992), Art. 2)

15.1.2 In other words, it is the variety of life on earth at all levels, from genes to worldwide populations of the same species; from communities of species sharing the same small area of habitat to worldwide ecosystems.

15.1.3 Biodiversity is a key component of the environment:

- Is a vital, integral part of the planet's life support system;
- Is the basis for evolution and adaptation to a rapidly changing environment;
- Is a key component of a functioning environment for future generations;
- Is essential to maintain clean water, fertile soil and clean air, thereby providing the basis for existence and indirect economic benefits;
- Can be managed and used for economic benefit, for instance to produce crops, medicines, building materials, fuel and tools;
- Has economic and social values e.g. in leisure and recreation or tourism;
- Has educational, aesthetic and spiritual value, and so enriches our quality of life;
- It determines the distinctive character or ‘feel’ to an area, be it a chalk downland, estuary, woodland or moor; and
- People value the existence of biodiversity and want it conserved.

15.1.4 The main threats to both local and global biodiversity are associated with human activities causing habitat loss/ damage, loss of biodiversity, loss of protected species, disturbance to and pollution of ecosystems, risk to unprotected habitats. Many species-populations are being reduced and fragmented below viable sizes. Conserving biodiversity is a global, long-term challenge and requires global, long-term solutions that start at the local level.

15.1.5 Biodiversity depends fundamentally on a variety of ecological functions and processes. Many of the processes that reduce biodiversity – e.g. loss or isolation of habitats - operate at the ecosystem and landscape level. The

Convention on Biological Diversity advocates an 'ecosystem approach' to assessment of impacts on biodiversity, helping to ensure the ecosystem processes that drive or support biodiversity are understood and that ecosystem health and viability can be maintained. For example maintenance of river water quality in riverine ecosystems. Despite this the landscape scale biodiversity should also be considered, e.g. migratory habitats, due to the larger environmental changes, e.g. climate change.

- 15.1.6 Habitat amount, quality and spatial organisation affects genetic and species diversity. Habitat diversity describes the number and variety of habitats available within the landscape: landscapes with a large number and range of habitats usually support higher levels of species diversity than landscapes with a more limited range of habitats, but this does not necessarily make them more important, this is dependent on species rarity. Landscapes with low habitat diversity can therefore still have a critical role in conserving biodiversity.
- 15.1.7 Most species require a variety of habitats. The loss, fragmentation or decline in quality of a single habitat can therefore have a serious impact on the populations of a variety of species, even those not obviously associated with it.
- 15.1.8 Species diversity is the variety of species within a community, a habitat or an ecosystem: some habitats (e.g. chalk grassland) are inherently species-rich, whilst others (e.g. acid grassland) are relatively species-poor. As such, the specific species that are present is important, not just how many there are.
- 15.1.9 Genetic diversity is a measure of the variety of genes within a species or a population. Genetic diversity is important because it allows species to adapt to changing environmental circumstances: the poorer its genetic base, the more vulnerable a species is to extinction
- 15.1.10 Therefore, components of biodiversity, at each level, should be evaluated in terms of:
- Composition: what there is and how abundant it is
 - Structure: how biological units are organised in time and space
 - Function: the role different biological units play in maintaining natural processes and dynamics.

(Countryside Council for Wales⁵)

⁵ CCW et al. (May 2004) 'Strategic Environmental Assessment and Climate Change: Guidance for Practitioners' www.sea-info.net

15.2 Legislation

15.2.1 The main international conventions, EU Directives and UK legislation on biodiversity, flora and fauna relevant to SEA include:

- **Ramsar Convention on Wetlands of International Importance, 1971** – a commitment by the signatories to conserve wetlands of international importance, especially as waterfowl habitats;
- **(Wild) Birds Directive 79/409/EEC, 1979** - protection of all naturally occurring wild bird species and their habitats, with particular protection of rare species;
- **Bonn Convention on the Conservation of Migratory Species of the Wild Animals, 1979** - to protect threatened animals (listed) that migrate across national boundaries and/or the high seas;
- **Bern Convention on the Conservation of European Wildlife and Natural Habitats, 1979** - to protect endangered species and their habitats. Amended (1989, 1996) to set up the ENROLLED network of Areas of Special Conservation Interest. Its provisions underlie the Habitats and Species Directive;
- **Wildlife & Countryside Act (WCA), 1981** - The principal instrument for the protection of Sites of Special Scientific Importance and endangered wildlife within the UK. Amended on several occasions, most notably by the Countryside and Rights of Way (CRoW) Act (2000).
- **UN Conference on Environment and Development (Rio Earth Summit), 1992 – Agenda 21**. On sustainable development. Includes the Convention on Biological Diversity;
- **Habitats and Species Directive 92/43/EEC, 1992** – (a) to protect important natural habitat (listed in Annex I, amended in Directive 97/62/EC) and species (listed in Annex II), using measures to maintain or restore their "favourable conservation status", principally by Special Areas of Conservation, but also (through land-used and development policies) by management of the landscape features of importance to wildlife outside SACs; (b) to safeguard species leading strict protection (Annex IV). This Directive is interpreted into UK law through the Conservation (Natural Habitats &c.) Regulations, 1994.
- **Protection of Badgers Act. 1992**. This Act specifically protects badgers from killing and injury and prohibits intentional/reckless damage or destruction of a badger sett (or disturbance of a badger in a sett) without an appropriate licence;
- **Hedgerow Regulations, 1997**. These regulations intend to ensure that the most historically/ecologically valuable hedgerows are not removed/developed without due consideration of their value. The regulations also provide a method by which the most valuable hedgerows (Important Hedgerows) can be determined. Hedgerows that are within or mark the boundary of the curtilage of a dwelling are exempt from the regulations.

- **Air Quality (Limit Value) Regulations, 2003.** These regulations identify annual mean concentrations of certain air pollutants above which damage will be caused to vegetation and ecosystems.

Policies and Guidance

- **Sixth Environment Action Programme** in which one of the key objectives is to "protect and restore the functioning of natural systems and halt the loss of biodiversity";
- **UK Biodiversity Action Plan** which makes proposals (a) to conserve key species and habitats by the production of national species action plans and habitat action plans; and (b) to promote the development of local biodiversity action plan as a means of implementing the national plans. There are around 160 of these Local Biodiversity Action Plans (LBAPs) throughout the UK identifying the habitats and species that are important at the local level, including the national priorities.
- **Working with the Grain of Nature: The Biodiversity Strategy for England, 2002.** This document (and its daughter publications) is intended to provide a strategic overview of, and co-ordinate action on, the national and local BAP process. The Strategy provides the Government's vision for the conservation of biodiversity over the forthcoming years and promotes the enhancement of biodiversity and development that makes minimal adverse impact on natural heritage. Various indicators have been developed in order to record progress with these objectives.
- **Planning Policy Statement 9: Biodiversity and Geological Conservation, 2005** (including the explanatory notes provided in ODPM Circular 06/05). This sets out the Government's policy on biodiversity within the planning process and instructs Local Authorities on the issues they should consider when determining planning applications. It replaces Planning Policy Guidance Note 9.
- **SEA and Biodiversity: Guidance for Practitioners, 2004,** which aims to ensure that biodiversity considerations are appropriately addressed in SEA
- **Biodiversity by Design: A Guide for Sustainable Communities, 2004.** This Town and Country Planning Association document provides guidance on how to maximise opportunities for biodiversity in the planning and design of sustainable communities.

15.3 Baseline

15.3.1 The limestone plateau of South Kesteven consists mostly of heavy calcareous soils, covered mostly by Grade 1, 2 and 3 agricultural land. It also contains good examples of ancient and semi-natural woodland and grassland areas, which have survived in small pockets as calcareous soils are often difficult to cultivate.

15.3.2 South Kesteven has 16 nature reserves covering approximately 193 ha, including mostly grassland, woodland and wetland. It also contains 539 ha of designated SSSIs, 60.89% of which are considered to be in “favourable” condition. These areas provide habitat to a variety of species of fauna and flora including typical limestone plants, scrubs, butterflies, and birds such as the whitethroat, tree sparrow and nightingale. The wooded areas are also home to several species of bats, birds and moths.

15.4 Context Review

15.4.1 The following key messages are taken from the context review in the Scoping Report:

Key Messages from the Context Review	Evidence Source
The Habitats Directive sets out the requirement to submit and subsequently adopt Special Areas of Conservation (SAC) under the Natura 2000 network	European Community Directive 92/43/EEC ‘Habitats Directive’ (1992)
Maintenance of the favourable conservation status of all wild bird species across their distributional range	European Community Directive 79/409/EEC ‘Birds Directive’ (1979)
Where a proposed development may give rise to significant harmful effects, the Council will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered	PPS 9 Biodiversity & geological conservation (2004)

15.5 Likely future conditions

15.5.1 The Scoping Report contains insufficient data to assess the likely future conditions.

15.6 Likely significant effects of the Core Strategy Preferred Options

15.6.1 The baseline identifies, using available data, the current state of South Kesteven’s biodiversity. Predicting the likely significant effects of the Preferred Options on biodiversity is not a straightforward task. These will depend on a wide range of factors and decisions made also at national, regional and country level. Nevertheless it is possible to make the following comments regarding the Preferred Options that are considered to have a potential impact on biodiversity sites.

Preferred Option 1: Sequential Development in South Kesteven

- 15.6.2 Focusing development on brownfield sites may have the positive impact of minimising encroachment on undeveloped green areas. Nevertheless, the biodiversity potential / richness of brownfield sites must be taken into account and there is the possibility of a significant negative impact on biodiversity resulting from development on these areas.
- 15.6.3 The option also proposes to place some development on greenfield sites, namely those “*not identified and protected by other LDF policies*”. It is unclear whether the LDF will include policy to protect wildlife and biodiversity and, hence, unclear whether these greenfield sites might be protected in the event that they are of value. It may be that subsequent elements of the LDF will include such policy but the Core Strategy does not.

Preferred Options 3 and 4: Economic and Residential Development

- 15.6.4 There is need for more information on the location of development in relation to that of the biodiversity sites. This information does not form part of the Core Strategy and will be further assessed in the SA / SEA of the Housing and Employment Allocations.

Preferred Option 6: Protection and Enhancement of the Character of the District

- 15.6.5 This option is likely to have a positive impact on biodiversity sites, as habitats – especially distinct habitats such as ancient and semi natural woodland – contribute to the distinct character of the landscape.
- 15.6.6 The Preferred Option does not include biodiversity as a criterion to judge the significance of the form and character of towns and villages in South Kesteven and we suggest that this could be a criterion for determining the character value of a given area. In particular, it is important to note that the list of sites mentioned as worthy of protection from development due to their character value may also be worth preserving for their biodiversity value.

Preferred Option 7: Design

- 15.6.7 This option proposes that new development should be designed to the highest quality as well as incorporating sustainable building techniques, wherever possible. Design should also reflect and complement the existing character of its surroundings.
- 15.6.8 The option is likely to have a positive impact on biodiversity as it aims to give consideration to “landscaping and other wildlife / biodiversity features which positively enhance the proposal and its surroundings”. This could be

further strengthened by mentioning specific habitats / habitat characteristics, which can contribute to giving their surroundings individual and unique features.

- 15.6.9 The alternative option suggests that rather than basing design on a local design policy, decision-making would rely on national and regional policy documents, as well as “on the creative flair of developers and their architects”. We suggest that this would bring only a small degree of protection to biodiversity through design, as national and regional policy is too general to deal with local design issues. For example, the East Midlands Regional Spatial Strategy mentions the increase in the region’s biodiversity as a core objective, including a “no net loss of priority habitats and species” objective. Nevertheless, it remains general and does not provide more specific policy.

Preferred Option 9: Development in Conservation Areas

- 15.6.10 This option recognises the importance of Conservation Areas to the built environment and details the approach of the Council to proposals for change within them.
- 15.6.11 It is likely to have a positive incidental impact on biodiversity because any areas of biodiversity importance located within Conservation Areas are likely to benefit from enhanced protection under the option.
- 15.6.12 More importantly, this option also mentions the value of such features as trees or hedgerows and considers that their removal is “not acceptable”. These features are vital not only for their character but also for their biodiversity value, which could be of considerable local significance.

Preferred Option 12: Reducing the Risk of Flooding and Protecting Water Resources

- 15.6.13 The option highlights the importance of a flood risk assessment for development proposals in areas identified at Level 3 risk of flooding. It also discourages inappropriate development in fluvial floodplain areas. While development in flood risk areas should generally be avoided, in cases where it is allowed following a flood risk assessment, flood risk mitigation measures present an opportunity for the enhancement of biodiversity.
- 15.6.14 As suggested in the chapter on Water above, the option could be improved by removing the reference to mitigation in point three. This would prevent any development that may have a detrimental effect on river and stream corridors, ponds or wetland habitats, and would be a significant advance on the current Local Plan policy.

15.7 Proposed mitigation measures

15.7.1 The following mitigation measures are suggested:

- **Preferred Option 6** - biodiversity could be included as a criterion for determining the character of a given area, recognising its importance in enhancing the character of the District
- **Preferred Option 7** – similarly, biodiversity could be taken into consideration as a positive factor in new development, as design should “*reflect and complement the existing character of its surroundings*”, and habitat features are an important factor of this character
- **Preferred Option 12** - in areas where development is allowed following a flood risk assessment, flood risk mitigation measures present an opportunity for the enhancement of biodiversity
- **Preferred Option 12** - should be amended to read: “*development which is likely to have a detrimental impact on the natural features of river and stream corridors, ponds or wetland habitats will not be permitted*”

15.8 Proposed monitoring

15.8.1 None proposed.

16 LANDSCAPE

16.1 Introduction

16.1.1 Landscape character is defined as 'a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse' (Source: Landscape Character Network). Landscape what gives a locality its sense of place, making it different from neighbouring localities.

16.1.2 Landscapes can be areas designated for their natural beauty or ambience but can also be 'ordinary' places that are not given statutory protection. Urban landscapes also have an important role to play in affecting the quality of people's lives and therefore enhancing 'townscapes' is also important.

16.2 Legislation

16.2.1 The following are the principal legislative instruments concerning landscape protection:

- **National Parks and Access to the Countryside Act (1949)** - provided for the creation of Areas of Outstanding Natural Beauty (AONB)
- **Countryside Act (1968)**
- **Wildlife and Countryside Act (1981)**
- **Planning (Listed Buildings and Conservation Areas) Act (1990)** - provided specific protection for buildings and areas of special architectural or historic interest
- **Countryside and Rights of Way Act (2000)** - created a new framework for public access to the countryside, provided greater protection to Sites of Special Scientific Interest (SSSIs) and new arrangements for the management of AONBs

16.3 Landscape Baseline in South Kesteven

16.3.1 The Countryside Agency's Countryside Character Initiative divides the landscape in England into 159 broad 'character areas'. South Kesteven District lies primarily in the Kesteven Uplands character area, although the extreme southern portion of the District (to the south of Stamford) is distinctively different and lies within the Rockingham Forest character area.

16.3.2 The Kesteven Uplands are characterised by the following features (Source: Countryside Agency Character Area 75, Kesteven Uplands):

- Medium-scale undulating mixed farming landscape dissected by rivers and enclosed by hedgerows (and by stone-built walls to the south)
- Species-rich verges and meadows

- Significant areas of woodland including ancient and semi-natural woodland which frame and contain views
- High concentration of historic houses and associated parklands
- Generally a dispersed but nucleated settlement pattern, with local concentrations to Fen edge in east
- Picturesque villages constructed in local limestone and the stone town of Stamford
- Airfield sites, some now redundant, in exposed elevated areas
- Archaeological richness including ancient tracks
- Limestone and ironstone quarries

16.3.3 There are no Areas of Outstanding Natural Beauty (AONBs) or National Parks in South Kesteven.

16.3.4 The countryside between the B1174 Bourne-Stamford Road and the A1 Great North Road, from the District boundary to the south to the B676 to the north has been designated as an Area of Great Landscape Value since 1954. The Witham Valley south of Grantham, the Lincolnshire Escarpment north of Grantham and land alongside the A1 are similarly designated as Areas of Great Landscape Value.

16.3.5 There are 46 Conservation Areas within the District. These are urban areas designated by the Council because of their special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance.

16.4 Context Review

16.4.1 The following key messages are taken from the context review in the Scoping Report and the Local Plan:

Key Messages from the Context Review	Evidence Source
Requirement to raise awareness; promote training and education; identify and assess landscape character; define landscape quality objectives for the character areas identified	European Landscape Convention (2000)
Need to provide green and open space in support of urban renaissance and rural renewal, social inclusion, community cohesion, health and well-being	PPG17
Conserve and enhance the natural environment; protect open countryside from inappropriate development; afford special protection to Areas of Great Landscape Value	South Kesteven Local Plan (1995)
Protect from development those prominent areas of landscape important to the character and setting of Grantham and Stamford; prevent coalescence of settlements; identify and protect from development those open areas important to	South Kesteven Local Plan (1995)

the character of settlements	
The management of species rich meadows in river / stream valleys through restoration of flood plains is important	Countryside Agency Character Area 75, Kesteven Uplands
Hedge restoration and reinstatement, including ash and oak planting particularly on exposed plateau areas should be considered; this might include the management of wide verges beside roads	Countryside Agency Character Area 75, Kesteven Uplands
The management of existing woodland needs to be addressed, including traditional coppicing and thinning in ancient woodlands, replanting in modern woods and the creation of new woods particularly on higher ground	Countryside Agency Character Area 75, Kesteven Uplands
The retention and enhancement of estates, parkland and historic houses is important in the area	Countryside Agency Character Area 75, Kesteven Uplands
The use of traditional building materials such as local stone, Collyweston slate and pantiles would help to retain the character of villages; such villages might be better integrated into their local landscape by mix of planting and grassland re-creation on the fringes	Countryside Agency Character Area 75, Kesteven Uplands
Suitable redevelopment and visual integration of large scale developments, including airfields, in the landscape is a challenge	Countryside Agency Character Area 75, Kesteven Uplands
Sensitive landscape restoration of stone quarries and sand and gravel works should be addressed in conjunction with maintaining geological and nature-conservation interests	Countryside Agency Character Area 75, Kesteven Uplands

16.5 Likely future conditions

16.5.1 The Countryside Agency suggests the following long-term trends are affecting the landscape in South Kesteven:

- Agricultural intensification and farm amalgamation leading to loss of pasture in valleys and enlarged field sizes on higher ground (now largely halted)
- Use of chemical fertilisers and pesticides has increased nitrate levels in watercourses, leading to part of area being designated a Nitrate Sensitive Zone and hence influencing cropping and land use
- Closure of second world war airfields and resultant redevelopment or dereliction
- Dualling and potential future upgrading of A1 and visible increase in traffic
- Growth of quarries and quality of restoration
- Extensive sand and gravel extraction and subsequent restoration west of Market Deeping

16.5.2 If unmitigated, these trends may continue to damage the character of the landscape in the District.

16.6 Likely significant effects of the Core Strategy Preferred Options

Preferred Option 1: Sequential Development in South Kesteven

16.6.1 Although this option directs development towards previously developed land in Grantham, in preference to Greenfield or countryside sites, this is not significantly different in practice from the existing Local Plan Policy EN1, which says that development "*should not intrude into the setting of important buildings, landscape features or prominent views*".

16.6.2 However the option makes no reference to allowing development for minerals extraction in the countryside, which is referred to in Local Plan Policy EN2. Given that the Countryside Agency has identified extensive minerals extraction as an adverse impact on the District's landscape character, this element of the option is likely to be significantly beneficial.

Preferred Option 6: Protection and Enhancement of the Character of the District

16.6.3 The Preferred Option is likely to be more flexible in its application than the equivalent Local Plan policies (EN3 - EN6) since it does not present an exhaustive list of areas that will be retained as open space or protected for their landscape value. Potentially this could allow the preservation of landscapes that are locally important but not widely recognised as such.

16.6.4 The application of this option would be enhanced if reference is made to the County and District Landscape Character Assessments.

Preferred Option 9: Development in Conservation Areas

16.6.5 Current policy (Policy C9 in the Local Plan) says that development will not normally be permitted in certain areas, including Conservation Areas, of townscape value. The Core Strategy Preferred Option, however, states that "*new development will only be allowed where it contributes to, preserves or enhances the character and appearance*" of Conservation Areas. This form of words seems likely to offer a significantly higher level of protection to Conservation Areas than the existing policy.

16.6.6 However it appears that not all of the areas referred to in the current policy are Conservation Areas. It is unclear what status these areas have, but it is possible that they also require protection that is no longer conferred by the Preferred Options.

16.7 Proposed mitigation measures

16.7.1 None proposed.

16.8 Proposed monitoring

16.8.1 None proposed.

17 SUMMARY OF PROPOSED MITIGATION

17.1.1 Table 17.1 below lists the mitigation measures proposed in the preceding chapters.

17.1.2 In addition the Council has identified a need to provide housing that can be adapted for use by people with disabilities. The Council is considering how this could best be incorporated into the Preferred Options.

Table 17.1: proposed mitigation measures

Preferred Option	Proposed Mitigation	Reason
Preferred Option 1: Sequential development in South Kesteven	The Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD	Possible impact on existing areas of poor air quality
	The Council might consider the case for including areas liable to flooding into the sequential list, but placing them in last place	This will emphasise the growing importance of addressing flood risk as an impact of climate change
	The Council should consider means of reducing potential congestion in the Grantham AAP	Focus of housing development in Grantham is likely to generate additional traffic in the town
Preferred Option 2: Sustainable Integrated Transport	It is proposed that this option is reviewed and that access by car is not treated as a consideration in favour of proposals, other than in rural areas where other means of access are impractical. The relevant portion of the option might read: <i>"a) locating development in areas which are accessible by sustainable transport means, such as public transport, cycling or walking, and additionally accessible by car in rural areas"</i>	The option treats the private car as a means of access equivalent to more sustainable modes. This appears to conflict with Government guidance in PPS1 and PPS7, except in rural areas
	Should consideration also be given to the needs of equestrians?	A possible enhancement
	The Council is recommended to urge the Highways Agency and Lincolnshire County Council to take measures to restrain the use of the car where possible	A co-ordinated strategy is necessary to deal with potential impacts on areas of poor air quality
Preferred Option 3: Economic Development Provision	The Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD	Possible impact on existing areas of poor air quality

Preferred Option 4: Residential Development	The Council will need to have regard to the potential air quality impacts of new development in the Housing and Economic DPD	Possible impact on existing areas of poor air quality
Preferred Option 5: Providing for affordable housing	None proposed	
Preferred Option 6: Protection and Enhancement of the Character of the District	None proposed	
Preferred Option 7: Design	Consider strengthening the wording of the option to, for example, give " <i>priority</i> " rather than " <i>consideration</i> " to the measures listed	This would make sustainable design methods more likely to be incorporated in new development
	Biodiversity could be taken included as a factor in the list of measures to be considered	
	It is recommended that this option requires certification under a recognised sustainable building such as BREEAM / Ecohomes	This will guarantee a level of sustainable construction
Preferred Option 8: Protecting Neighbourhood Amenity through Design	Biodiversity could be included as a criterion for determining the character of a given area, recognising its importance in enhancing the character of the District	Habitats help characterise locations
Preferred Option 9: Development in Conservation Areas	None proposed	
Preferred Options 10: Listed Buildings	None proposed	
Preferred Option 11: Archaeological and Historic Sites	None proposed	
Preferred Option 12: Reducing the risk of flooding and protecting water resources	There may be a case for removing the phrase " <i>with proven need</i> " from the sub-clause dealing with rural diversification projects	This would help facilitate rural diversification which is a stated aim of the Core Strategy
	Should be amended to read: " <i>3 development which is likely to have a detrimental impact on the natural features of river and stream corridors, ponds or wetland habitats will not be permitted</i> "	This is less ambiguous but more importantly the current wording offers little protection to these features
	In areas where development is allowed following a flood risk assessment, flood risk mitigation measures present an opportunity for the enhancement of biodiversity	Development in flood risk areas is not to be encouraged but if inevitable there are some opportunities for habitat creation

	It is recommended that the Council revisits this option to incorporate the sequential test set out in draft PPS25	Compliance with Government guidance
Preferred Option 13: Renewable Energy	None proposed	
Preferred Option 14: Renewable Energy Technologies	None proposed	
Preferred Option 15: Pollution Control	None proposed	
Preferred Option 16: Planning Obligations	None proposed	

17.1.3 The mitigation measures were considered by the Council at the Cabinet meeting (3rd April 2006) and it was agreed that the Preferred Options should be amended accordingly.

18 SUMMARY OF PROPOSED MONITORING

18.1.1 The following monitoring is proposed in the preceding chapters:

Population

- Total population
- Population structure by age
- Population structure by sex
- Population structure by ethnic background
- Population structure by social grade

Human Health

- *It is recommended that the Council agrees a suitable set of indicators in consultation with Lincolnshire Health and Social Care Partnership Board*

Economy

- Business registrations and de-registrations
- Gross Domestic Product per capita

Employment

- Economically active people of working age
- Employment by occupation

Transport

- Modal split of journeys within the District
- Proportion of people commuting to work outside the District
- Distance travelled annual by private car within the District

Crime and Safety

- Violence against the person
- Sexual offences
- Robbery
- Burglary of a dwelling
- Theft of a motor vehicle
- Theft from a motor vehicle

Housing

- Housing completions

- Affordable housing completions
- Average house prices
- Housing given planning permission on floodplains
- Housing built on previously developed land

Climate

- Emissions of greenhouse gases by source in the District
- Energy generated from renewable sources in the District
- Development in the floodplain
- Development incorporating Sustainable Urban Drainage Systems
- Number of homes or business flooded in the District

Air

- *It is recommended that the council incorporates indicators from its own Local Air Quality Management process*

Soil

- Percentage of development on brownfield sites
- Percentage of contaminated land undergoing remediation as part of development
- Percentage of development on greenfield land
- Area of 'best and most versatile' agricultural land (Grade 1, 2 and 3a) lost to development

Water

- Chemical and biological water quality
- Monitoring of groundwater for organic and inorganic pollutants
- Number of development permitted in areas at risk of flooding
- Number of flooding incidents

19 CUMULATIVE EFFECTS

19.1.1 The following three tables illustrate the cumulative effects of the Core Strategy Preferred Options against the SA Framework produced as part of the Scoping Report. The SA Framework consists of a set of aspirational Sustainability Appraisal Objectives (SA Objectives) that help define what is meant by sustainable development in South Kesteven.

19.1.2 The cumulative effects are those that result from the interaction of all of the Preferred Options and, consequently, the adverse impacts of some options on a particular Sustainability Appraisal Objective will be outweighed by the benefits of others.

19.1.3 The symbols used are as follows:

- Beneficial Impact ✓
- Beneficial Impact (but potential for mitigation) (✓)
- Uncertain impact (probably beneficial) ?
- No Impact ~
- Uncertain impact (probably adverse) ?
- Adverse Impact (but potential for mitigation) (X)
- Adverse Impact X

19.1.4 Beneficial Impact means that collectively the Preferred Options will clearly help to achieve the SA Objective. Conversely Adverse Impact suggests that the Preferred Options overall work against the achievement of the SA Objective. Brackets indicate where one or more measures are proposed to mitigate adverse impacts or enhance beneficial impacts.

19.1.5 Some adverse impacts are unavoidable: for instance, considerable growth is expected in Grantham which will place additional demands on water resources and will lead to more household waste being generated. It should be noted that this does not mean that water will be in short supply or that the Preferred Options do not include policy to encourage resource efficiency. Rather it indicates that, taken in isolation, the Preferred Options have certain adverse effects and measures will be required to deal with the problems identified.

Social					
SA Objective	Decision-making criteria	Short Term	Medium Term	Long Term	Options
To ensure that the housing needs of the community are met, in particular the affordable housing requirements	Will it help to meet affordable housing need?	~	✓	✓	High affordable requirement for new housing development
	Will it help provide balanced housing?	~	~	~	
	Will it reduce the number of unfit / non-decent homes?	~	(✓)	(✓)	Provides for significant increase in housing that will reduce the proportion of unfit homes
To facilitate improved health provision where appropriate	Will it add to the provision of health facilities?	~	✓	✓	Through planning obligations
To facilitate the provision of recreational facilities for all	Will it add to the provision of recreational / sports facilities?	~	✓	✓	Through planning obligations
Contribute to community safety by encouraging good design	Will it reduce levels of crime?	~	~	~	
	Will it reduce the fear of crime?	~	✓	✓	Requires new development to 'design out' crime
	Will it improve community safety?	~	~	~	
	Will it reduce noise concerns?	?	?	?	Significant growth of Grantham and increase in population suggests localised increases in disturbance from construction and from traffic
To ensure that development is located in the most sustainable locations to minimise adverse environmental impact	Will it help achieve the most sustainable pattern of development?	~	(X)	(X)	The Preferred Options balance economic growth with social and environmental factors, however there is potential for improvement as discussed in the chapter on mitigation
To protect and enhance the District's cultural, built and archaeological heritage	Will it have a positive impact upon the condition of Listed Buildings in the District?	✓	✓	✓	Offers protection to Listed Buildings

Environment					
SA Objective	Decision-making criteria	Short Term	Medium Term	Long Term	Options
To protect and enhance the District's Natural Assets and Biodiversity	Will it enhance designated sites?	~	~	~	
	Will it increase tree or woodland cover?	~	~	~	
	Will it increase populations of species and habitats listed within the Lincolnshire BAP?	~	~	~	
To enhance and conserve the environment of the District through sustainable design and development	Will it improve the places where people live?	~	✓	✓	Through regeneration and design measures
To manage prudently the natural resources of the district to reduce vulnerability to flood risk	Will it reduce vulnerability to flooding?	~	~	(X)	Some reservations about the long-term sustainability of development in Bourne in relation to flood risk
To minimise energy usage through sustainable design and development	Will it reduce energy consumption?	~	~	~	
	Will it increase the proportion of energy requirements through use of renewable sources?	~	~	~	
Conserve soil resources and quality	Will it reduce the amount of indigenous soil lost?	~	~	~	
	Will it improve soil quality?	~	~	~	
	Will it remediate contaminated soil?	~	(✓)	(✓)	Development on brownfield land will often mean development on contaminated land that will need remediation beforehand

Environment					
Conserve water resources and quality	Will it reduce water consumption?	~	X	X	Option seven requires new development to incorporate measures to reduce the use of water, nevertheless consumption overall seems likely to rise
	Will it improve river water quality and ecology?	~	~	~	
To minimise waste and encourage recycling and reuse of waste	Will it reduce household waste?	~	X	X	The scale of growth in Grantham seems likely to see an overall rise in the amount of waste generated, despite measures in option seven to promote re-use of natural resources
	Will it encourage the amount of waste being recycled?	~	~	~	
To maintain and enhance the quality of rural and urban areas	Will it improve the landscape and ecological quality and character of the countryside?	(✓)	(✓)	(✓)	Options six, seven, eight, nine and ten all contribute in various ways
	Will it reduce fly tipping and littering?	~	~	~	
	Will it maintain/enhance the distinctiveness of towns and villages?	✓	✓	✓	The sequential approach outlined in option one directs new housing away from towns and villages

Economy					
SA Objective	Decision-making criteria	Short Term	Medium Term	Long Term	Options
To encourage employment opportunities for all	Will it promote sustainable economic growth?	(✓)	(✓)	(✓)	Provides for local employment to maintain balanced growth
	Will it provide diversity in the economy?	~	~	~	
	Will it improve the diversity and level of skills of local people?	~	~	~	
	Will it encourage rural diversification in rural areas?	~	(✓)	(✓)	There are some limitations placed on diversification in options one and twelve
To facilitate the development of new technology to support a modern economic infrastructure	Will it increase the use of new technologies?	~	~	~	
	Will it encourage home working?	~	~	~	
	Will it improve research and development knowledge?	~	~	~	
To improve accessibility to jobs and services by increasing the use of public transport, walking and cycling	Will it improve accessibility to work by public transport, walking and cycling?	~	(✓)	(✓)	Co-location of housing and employment development will increase opportunities for people to walk or cycle
	Will it reduce commuting?	(✓)	(✓)	(✓)	Measures are in place to encourage new business into the District
To improve the social and environmental performance of the economy	Will it improve environmental performance?	~	~	~	
	Will it encourage ethical trading?	~	~	~	
	Does it value unpaid work?	~	~	~	

20 FURTHER INFORMATION

20.1.1 Further information on the LDF preparation process and the SA / SEA process can be obtained from:

Office of the Deputy Prime Minister (ODPM) - Planning Policy Statement 12: Local Development Frameworks

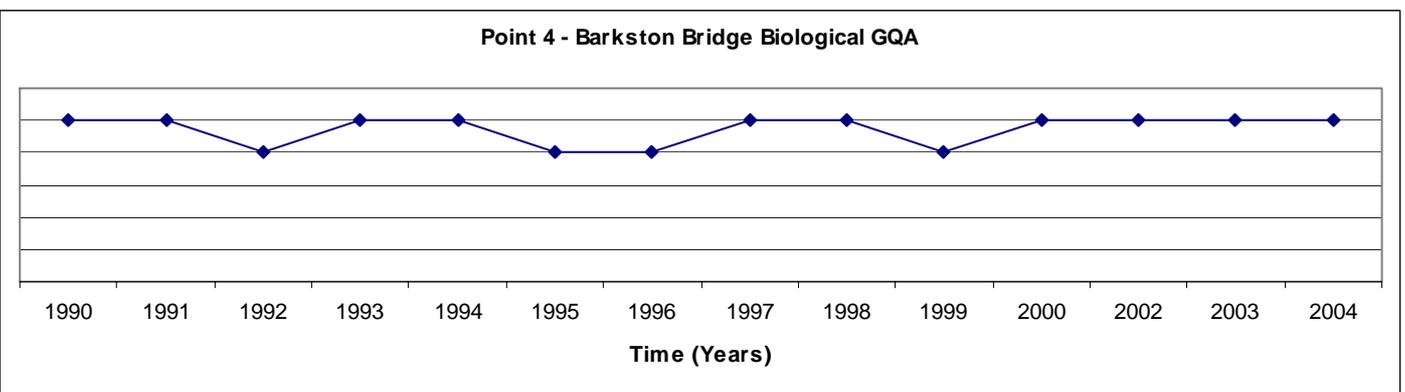
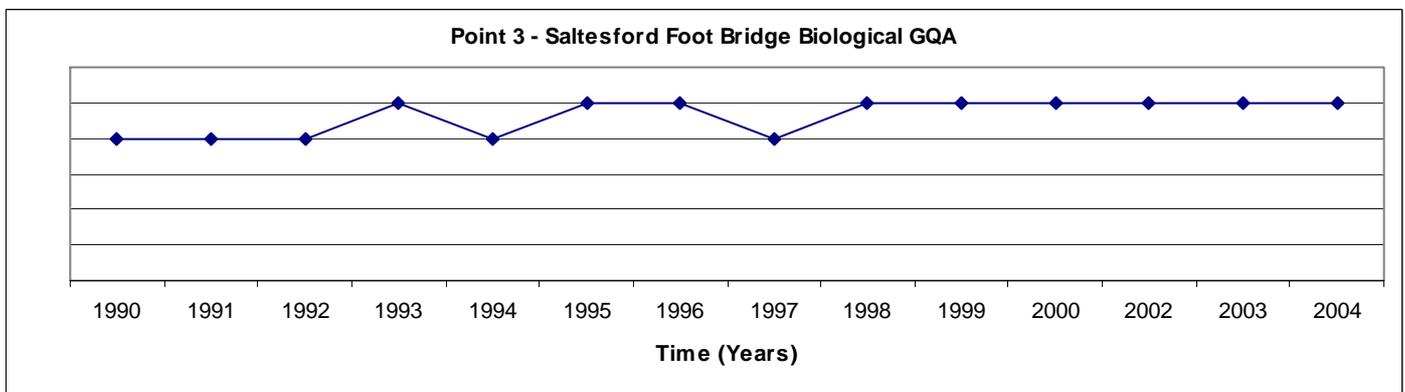
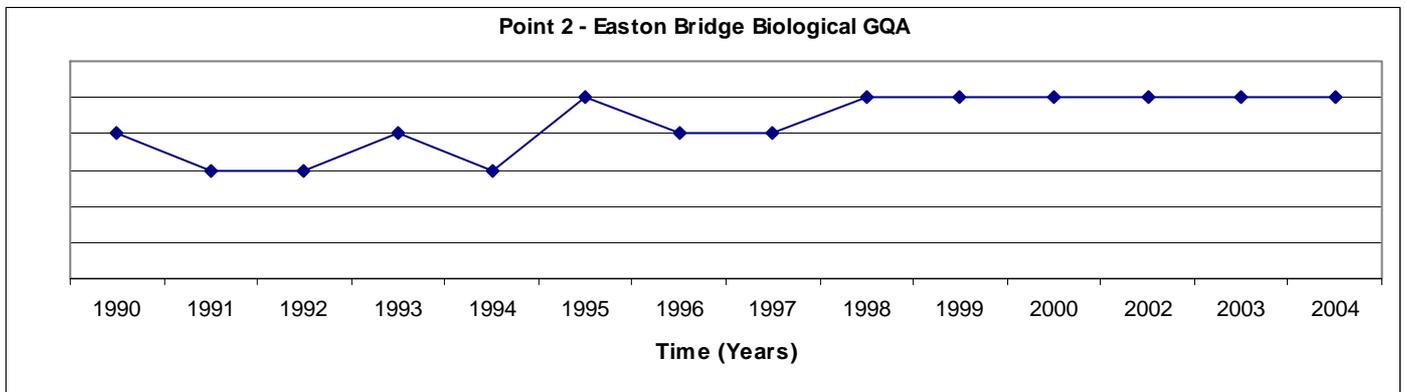
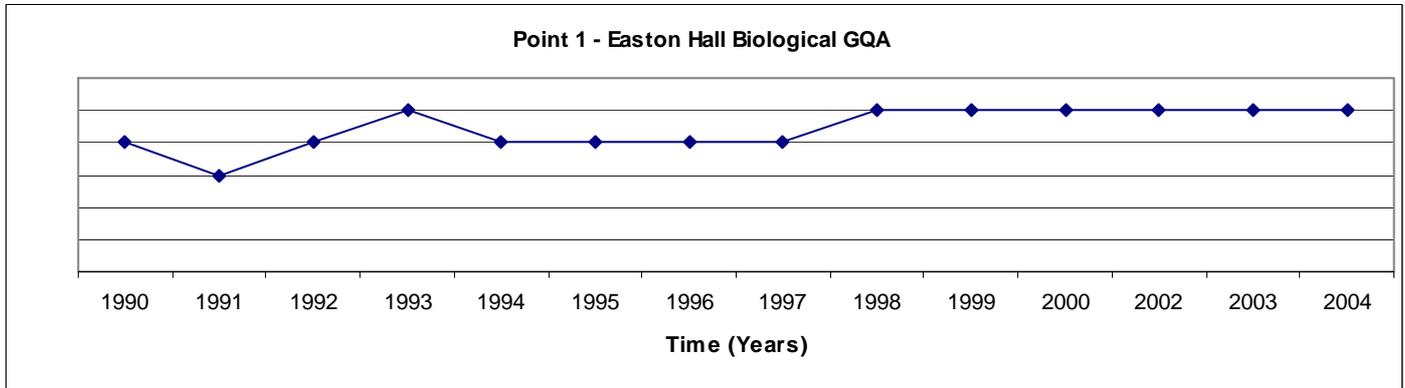
http://www.odpm.gov.uk/stellent/groups/odpm_control/documents/contentservertemplate/odpm_index.hcst?n=5382&l=3

20.1.2 The following website provides more general information on SA and SEA:

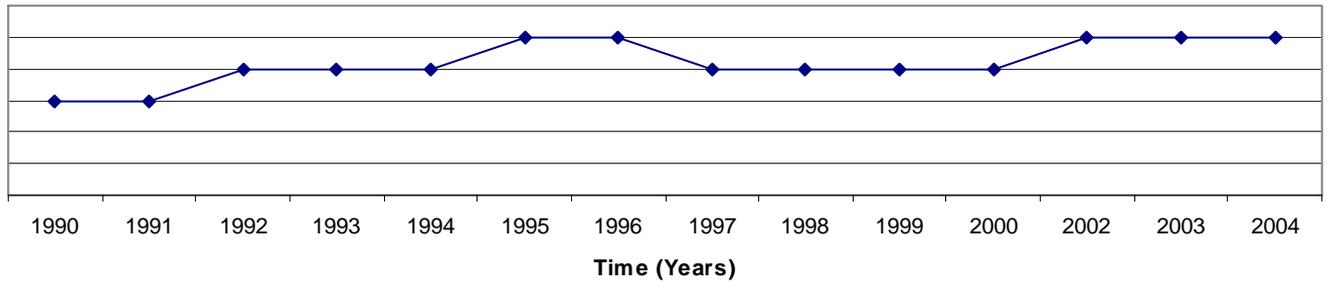
Office of the Deputy Prime Minister (ODPM) – Introduction to SEA, SEA regulations, SEA guidance

<http://www.odpm.gov.uk> ('Home' > 'Planning' > 'Environmental Assessment' > 'Strategic Environmental Assessment')

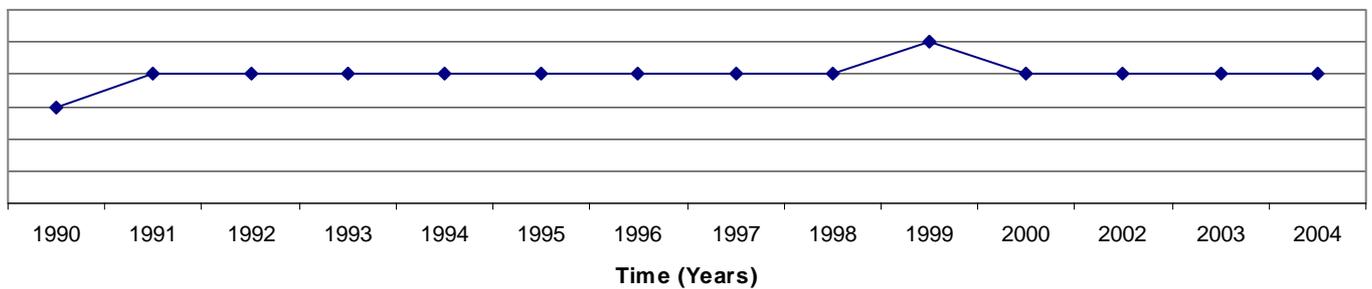
APPENDIX 1 – WATER QUALITY GRAPHS



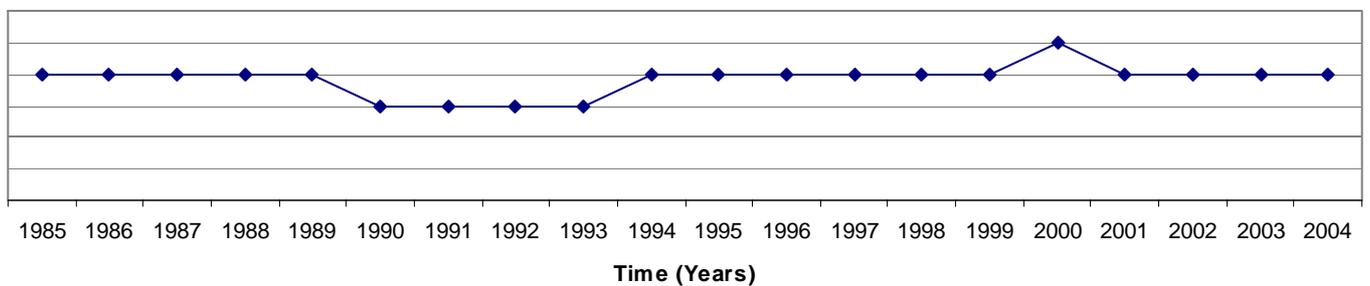
Point 5 - Hougham North Bridge Biological GQA



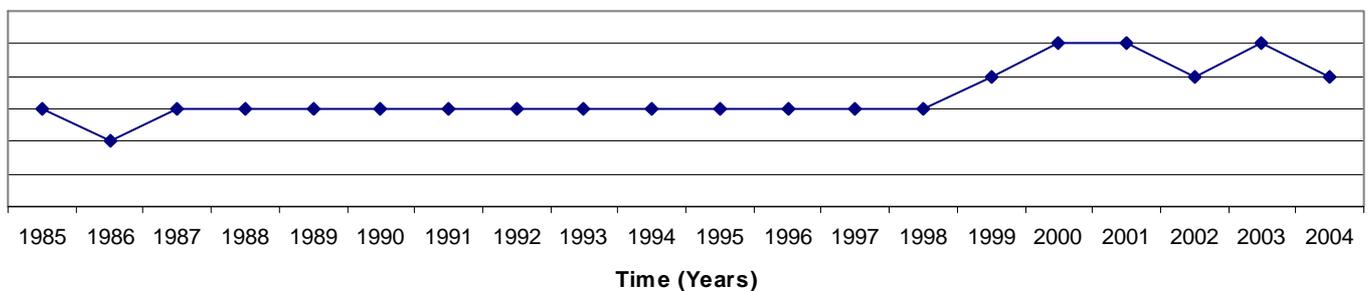
Point 6 - Claypole Bridge Biological GQA

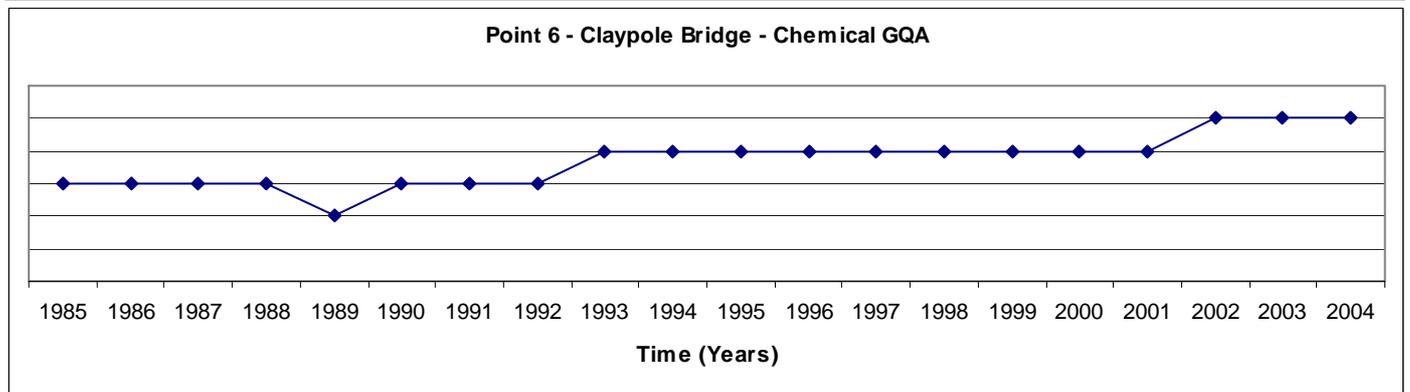
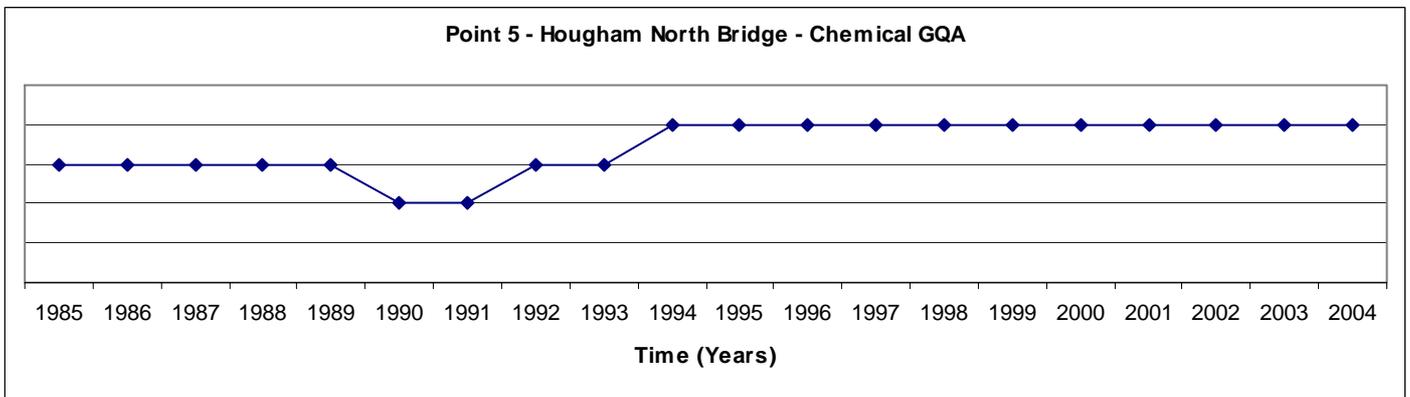
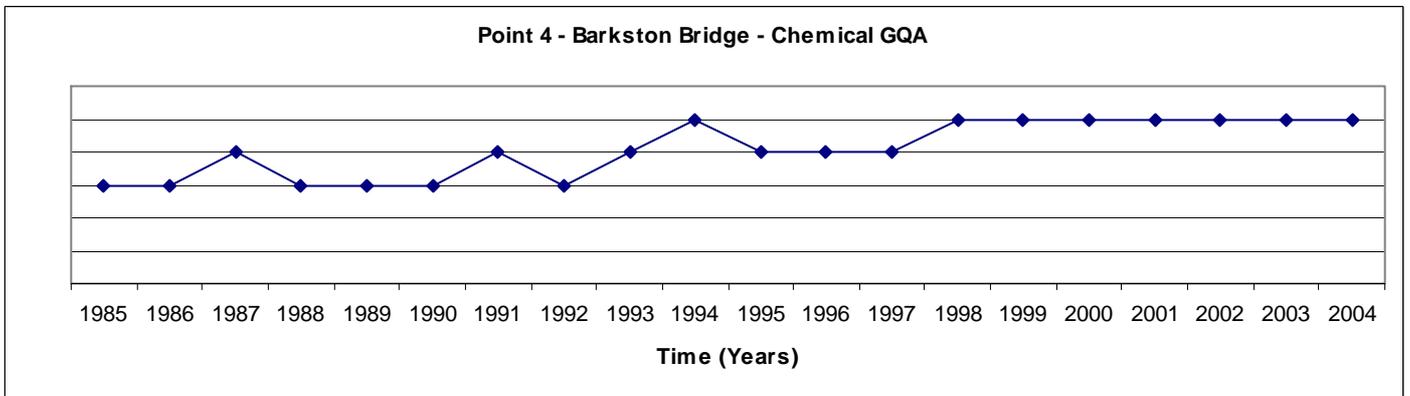
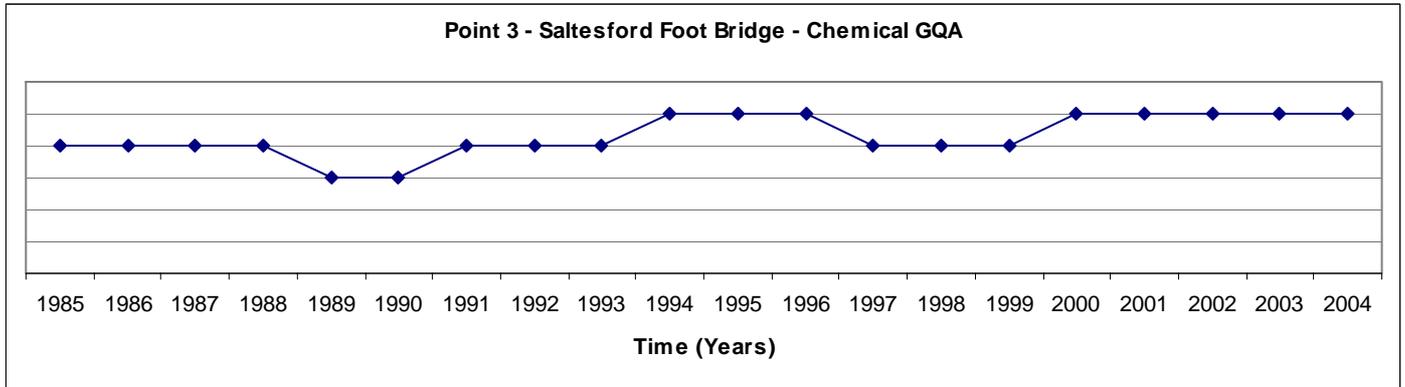


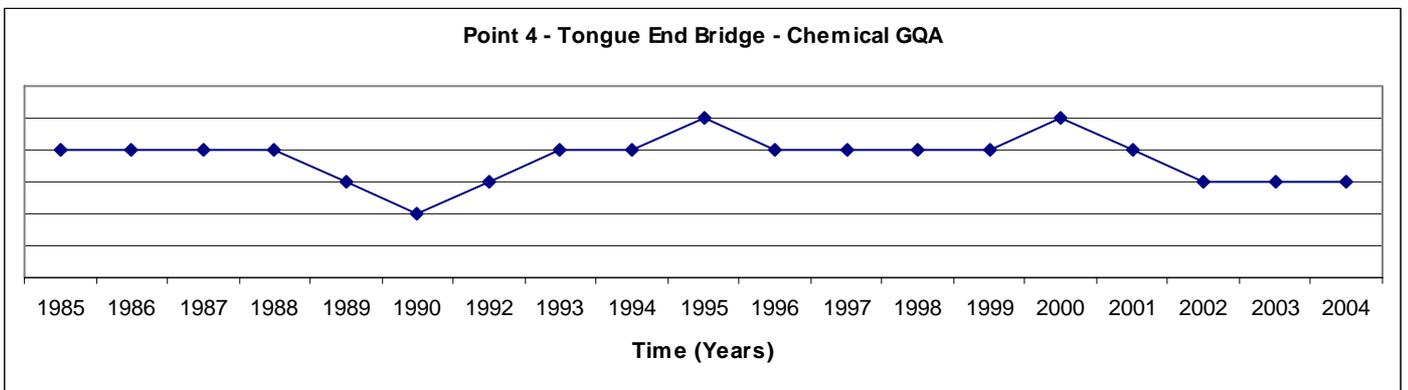
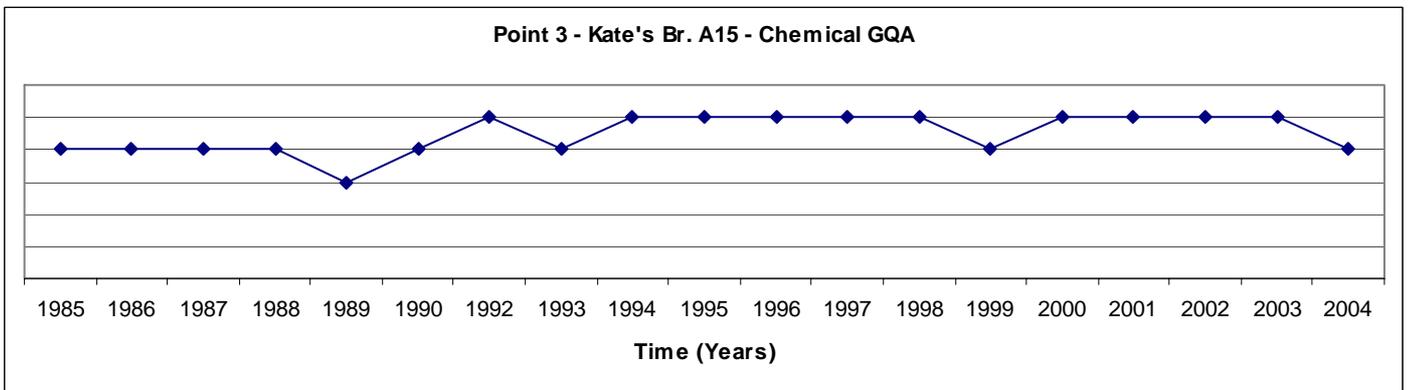
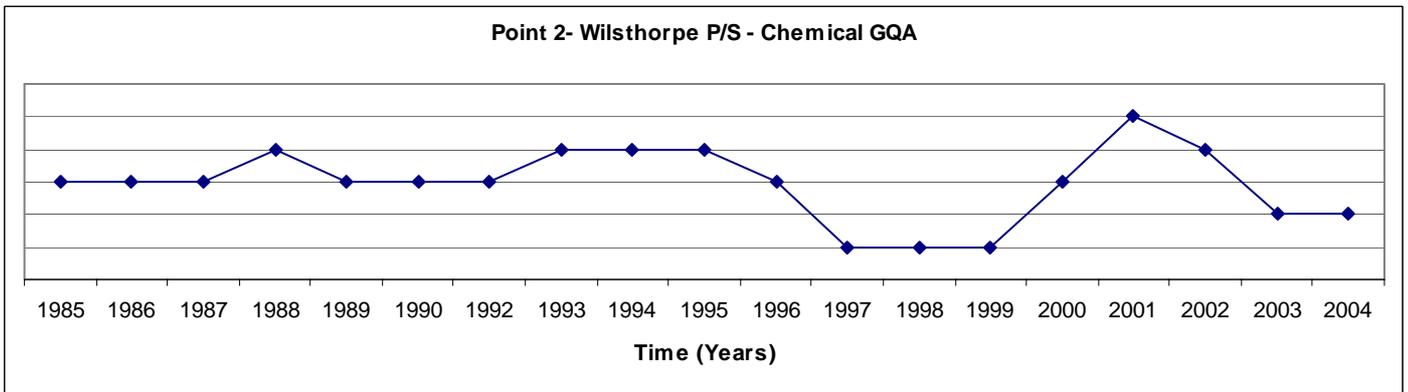
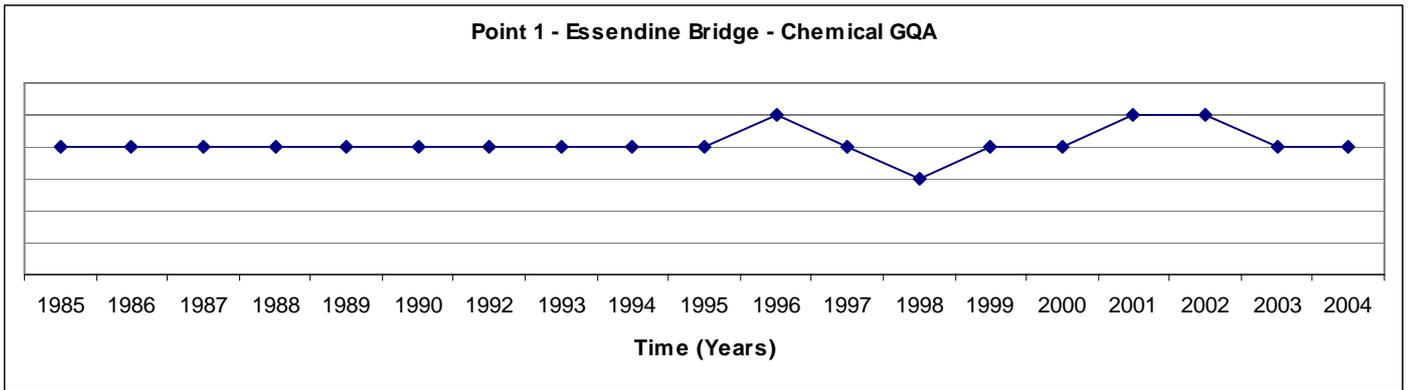
Point 1 - Easton Hall - Chemical GQA



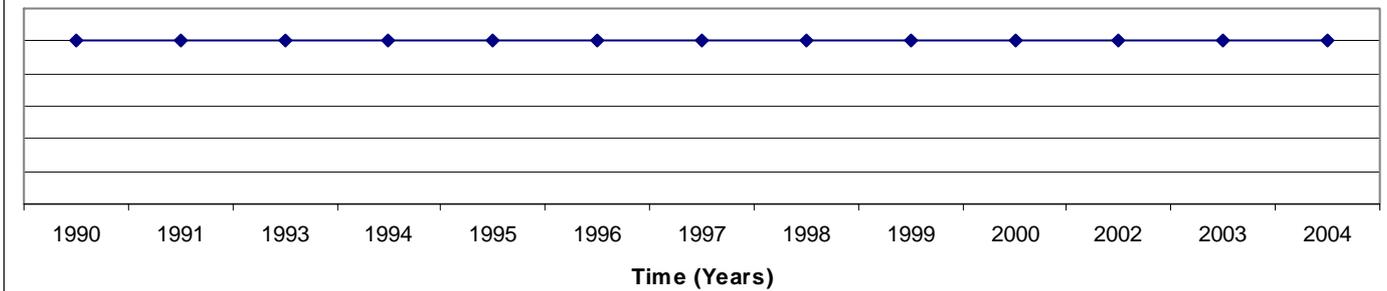
Point 2 - Easton Bridge - Chemical GQA



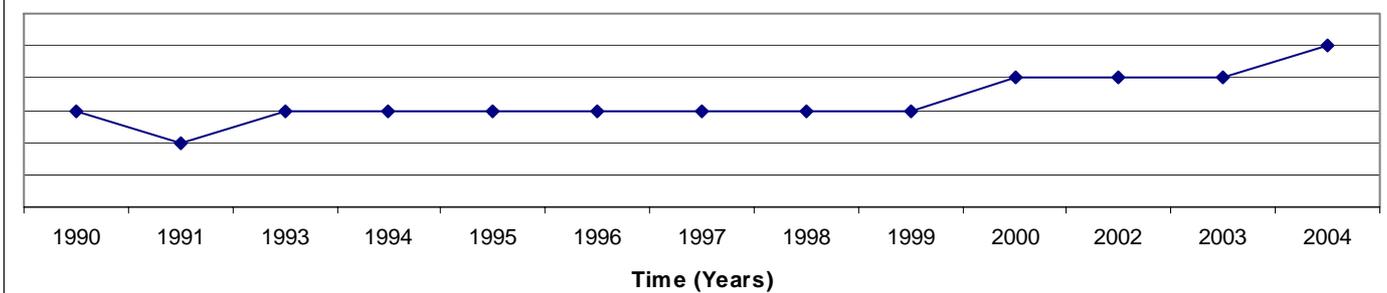




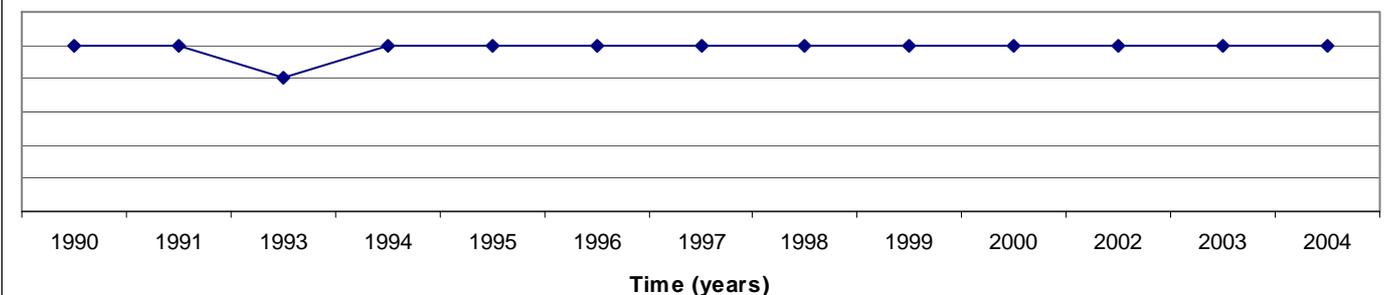
Point 1 - Essendine Bridge - Biological GQA



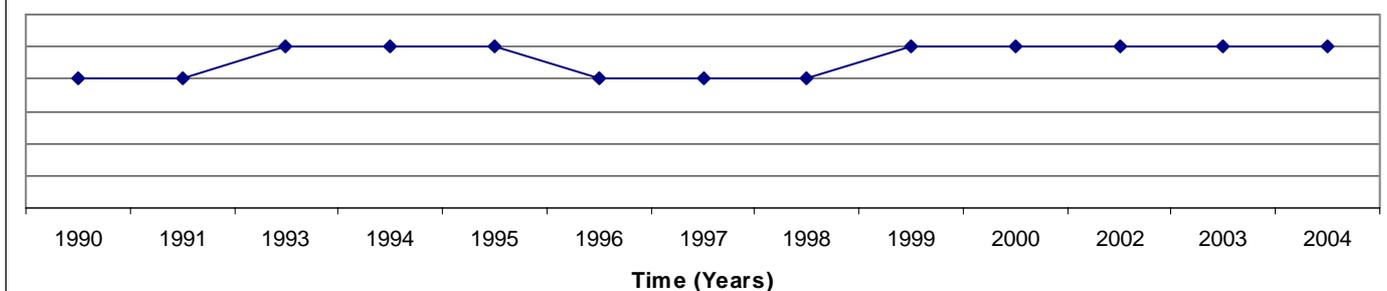
Point 2 - Wilsthorpe P/S - Biological GQA



Point 3 - Kate's Br. A15 - Biological GQA



Point 4 - Tongue End Bridge - Biological GQA



APPENDIX 2 – MAPS