

Final Sustainability Appraisal Scoping Report for Fenland's Local Development Framework

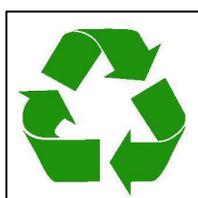
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Appendix A – Glossary of Acronyms and Key Terms



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1. NON-TECHNICAL SUMMARY

1.1 Why do Sustainability Appraisal?

SA looks at the social, environmental and economic effects of a DPD. This is to make sure that the Development Plan Documents we write are fully in accordance with sustainability objectives. Some Supplementary Planning Documents will be subject to SA.

The district is expected to grow significantly over the next 20 years and beyond, and therefore it needs to be ready to accommodate this growth in a sustainable way. This growth will not only be in housing and population but also in economic activity and infrastructure.

Social, economic and environmental aspects are equally important as the Council and its partners address health inequalities, education and skills deficits, an ageing population and additional migration into Fenland along with the impact of climate change.

All of the Development Plan Documents we produce must be subject to sustainability appraisal. This is a statutory obligation. In principle, we are not obliged to undertake sustainability appraisal of supplementary planning documents because they do not normally introduce new policies or proposals or modify planning documents which have already been subject to sustainability appraisal. However, a supplementary planning document may occasionally be found likely to give rise to significant effects which have not been formally assessed in the context of a higher-level planning document.

1.2 How to use the Scoping Report Document

The scoping report has been split into topics based around social, environmental and economic sustainability themes (see table below). This means that you can go to the topic you are interested in and read about the sustainability context; the key sustainability objectives; the current and (likely) future sustainability baseline situation; the issues that we think should be a particular focus of the appraisal; and whether we think there are any evidence gaps. Chapter 11 sets out the Sustainability Appraisal Framework with possible indicators that will be used to monitor significant positive and negative effects.

1.3 Summary of the Sustainability Issues facing Fenland District

Sustainability Theme	Specific Issues
Social	
Healthy, Accessible and Inclusive Communities	<ul style="list-style-type: none"> • Impact of growth on existing communities • Deprivation • Gypsy and Traveller Population • Ageing population • Immigration • Need for decent houses for everyone • Affordable housing • Access to sustainable transport modes • Sense of pride in the community • Recreation, including use of the navigable waterways • Reliance on the car • Only 10% of the total length of public rights of way in the county is in Fenland District
Environment	
Landscape and Cultural Heritage	<ul style="list-style-type: none"> • Unique Fenland landscape • Rural character of the District • Range of heritage assets • Vacant buildings • Heritage assets at risk • Wide range of conservation areas and listed buildings • Historic pattern of settlements
Climate Change and Flood risk	<ul style="list-style-type: none"> • Flood risk • High quality agricultural land • Renewable energy • Adapting to and mitigating against climate change
Land and water resources	<ul style="list-style-type: none"> • High grade agricultural land • Maximising the brownfield resource • Available capacity of water infrastructure • Water efficiency • Waste water treatment
Biodiversity	<ul style="list-style-type: none"> • Designated sites • Smaller sites that are rich in biodiversity including brownfield sites • Climate change impacts

	<ul style="list-style-type: none"> • Biodiversity gain through habitat restoration and creation
Pollution	<ul style="list-style-type: none"> • High carbon dioxide emissions • Reliance on the car • Previously developed land may be contaminated • Air Quality Management Areas
Economic	
Sustainable Economic Activity	<ul style="list-style-type: none"> • Shortage of skills • Unemployment and low numbers of qualified adults • Tourism • Leisure • Decline in Town Centres • Schools in Fenland score below County average in all 3 subjects at key stage 2 level • Since 2004 the percentage of pupils gaining 5+ A*-C grades in Fenland has steadily increased, from 36.2% in 2004 to 52.7% in 2008.

1.4 Sustainability Objectives

We have produced a Sustainability Appraisal Framework that takes into account a review of the sustainability context, baseline data gathering and the key sustainability issues identified for the District. The objectives and a set of decision making criteria will be used to assess the significant effects (positive and negative) of the policies set out in our forthcoming Development Plan Documents (the Core Strategy and Development Management Policies Development Plan Document and the Site Specific DPD and any Area Action Plans). We are not statutorily required to undertake SA on Supplementary Planning Documents (e.g. master plans) unless it is deemed necessary (refer to page 4 for more information).

Issue	Objective	Decision Making Criteria
Land and Water Resources	1.1 Minimise the irreversible loss of undeveloped land	<ul style="list-style-type: none"> ▪ Will it use land that has been previously developed? ▪ Will it use land efficiently? ▪ Will it protect and enhance the best and most versatile agricultural land? ▪ Will it protect known mineral resources?
	1.2 Increase water efficiency and limit water consumption to levels supportable by natural processes and storage systems	<ul style="list-style-type: none"> ▪ Will it increase water efficiency? ▪ Will it limit water consumption to levels supportable by natural processes and storage systems? ▪ Will it encourage the use of grey water recycling/rain water recycling in new developments?

Issue	Objective	Decision Making Criteria
	1.3. Avoid any deterioration of river water quality	<ul style="list-style-type: none"> ▪ Will development consider and address the potential detriment in water quality that it could cause? ▪ Will sustainable development and appropriate means of foul water drainage be promoted?
Biodiversity	2.1 Avoid damage to designated sites and protected species	<ul style="list-style-type: none"> ▪ Will it safeguard protected species? ▪ Will it protect sites designated for nature conservation interest? ▪ Will it help meet Fenland District Council's duty to conserve biodiversity (including Natural England's Habitats and Species of Principal Importance)?
	2.2 Maintain and enhance the geographical range, amount and viability of habitats and species	<ul style="list-style-type: none"> ▪ Will it conserve and enhance the range of habitats and species? ▪ Will it maintain and enhance the viability of habitats and species? ▪ In relation to biodiversity adaption and climate change, will the ecological resilience and variety of landscape be protected and enhanced including provision of adaption measures to protect biodiversity from climate change? ▪ Will it help achieve Biodiversity Action Plan targets?
Landscape and Cultural Heritage	3.1 Preserve and where appropriate, enhance buildings, monuments, sites, areas and landscapes that are designated or locally valued for their heritage interest; and protect/enhance their settings.	<ul style="list-style-type: none"> ▪ Will it protect sites, features of areas of historical, archaeological, or cultural interest (heritage assets including conservation areas, listed buildings, registered parks and gardens, scheduled monuments, undesignated archaeological sites and heritage at risk)? ▪ Will it enhance sites, features of areas of historical, archaeological, or cultural interest (heritage assets including conservation areas, listed buildings, registered parks and gardens, scheduled monuments, undesignated archaeological sites and heritage at risk)? ▪ Will it re-use/adapt buildings considered to be of architectural

Issue	Objective	Decision Making Criteria
		<p>or historic interest where necessary?</p> <ul style="list-style-type: none"> ▪ Will it respect the historic pattern of settlements?
	<p>3.2 Create places, spaces and buildings that are well designed, contribute to a high quality public realm and maintain and enhance diversity and local distinctiveness of townscape character.</p>	<ul style="list-style-type: none"> ▪ Will it maintain and enhance the diversity of townscape character? ▪ Will it maintain and enhance the local distinctiveness of townscape character? ▪ Will it maintain and enhance the character of settlements? ▪ Will it lead to developments built to a high standard of design and good place making?
	<p>3.3 Retain the distinctive character of Fenland's landscape.</p>	<ul style="list-style-type: none"> ▪ Will it maintain and enhance the diversity of landscape character? ▪ Will it conserve and enhance landscape character and quality ▪ Will it maintain and enhance the distinctiveness of landscape character?
<p>Climate Change and Flood risk</p>	<p>4.1 Increase use of renewable energy sources whilst minimising waste and the use of other energy resources</p>	<ul style="list-style-type: none"> ▪ Will it encourage energy efficient, low carbon building design? ▪ Will it reduce energy consumption through energy efficient systems within the building design? ▪ Will it lead to an increased proportion of energy needs being met from renewable sources? ▪ Will it avoid further contribution to green house gas emissions? ▪ Will it reduce domestic and non-domestic waste? ▪ Will it increase waste recovery and recycling? ▪ Will it take into account local opportunities for the provision of energy, water, fuel and food? ▪ Does it encourage the use of non-virgin materials (i.e. reuse, this encourages 'closing the loop on the material use system') ▪ Will it reduce use of highly polluting materials?

Issue	Objective	Decision Making Criteria
	4.2 Limit or reduce vulnerability to the effects of climate change	<ul style="list-style-type: none"> ▪ Will it minimise risk to people and property from events such as storm or subsidence? ▪ Will it improve the adaptability of people and property to changing temperatures?
	4.3 Minimise vulnerability of people, places and property to the risk of flooding from all sources	<ul style="list-style-type: none"> ▪ Will it minimise risk to people and property from current and future flooding? ▪ Will it allow for mitigation against future flood risk from all sources (tidal events and sea level rise; fluvial and increased river flows; storm events; surface water) ▪ Will it promote incorporation of Sustainable Urban Drainage Systems in new developments to minimise run-off/overland flow?
Pollution	5.1 Reduce emissions of greenhouse gasses and other pollutants (including air, water, soil, noise, vibration and light)	<ul style="list-style-type: none"> ▪ Will it reduce emissions of greenhouse gases? ▪ Will it improve air quality? ▪ Will it reduce traffic volumes? ▪ Will it support travel by means other than the car? ▪ Will it reduce levels of noise or noise concerns? ▪ Will it reduce or minimise light pollution? ▪ Will it reduce diffuse and point source water pollution? ▪ Will it improve water quality in the District's rivers and drains? ▪ Will it provide sustainable modes of travel e.g. walking and cycling?
	5.2. Reduce the risk of pollution to the environment from contaminated land.	<ul style="list-style-type: none"> ▪ Does it promote the remediation of contaminated land?
Healthy, Inclusive and Accessible Communities	6.1 Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities and community activities); and ensure all groups thrive in safe environments and	<ul style="list-style-type: none"> ▪ Will it help to improve life expectancy? ▪ Will it encourage healthy lifestyles? ▪ Will it reduce actual levels of crime? ▪ Will it reduce fear of crime?

Issue	Objective	Decision Making Criteria
	decent, affordable homes	<ul style="list-style-type: none"> ▪ Will it improve retention and provision of key local services and facilities, including health, education and leisure (village shops, post offices, pubs etc)? ▪ Will it improve access to key local services and facilities, including health, education and leisure (village shops, post offices, pubs etc)? ▪ Will it support and improve community and public transport and safe routes for walking and cycling? ▪ Will it support the provision of a range of housing types and sizes, including affordable and key worker housing, to meet the identified needs of all sectors of the community? ▪ Will it reduce the number of unfit homes? ▪ Will it meet the needs of the travelling community? ▪ Will it encourage new community activities and engagement in existing community activities? ▪ Will it improve access to a wider range of cultural activities?
	6.2 Create and enhance multifunctional open space that is accessible, links with a high quality green infrastructure network and improves opportunities for people to access and appreciate wildlife and wild places	<ul style="list-style-type: none"> ▪ Will it increase the quantity and quality of publicly accessible open space? ▪ Will it promote links with a high quality and accessible green infrastructure network and existing public rights of way? ▪ Will it provide sustainable modes of travel e.g. walking and cycling? ▪ Will it improve access to wildlife and wild places and promote their quiet enjoyment? ▪ Will it promote understanding and appreciation of wildlife?
	6.3 Redress inequalities related to age, gender, disability, race, faith, location and income	<ul style="list-style-type: none"> ▪ Will it encompass people from all different backgrounds, social groups and locations? ▪ Will it encourage communities to

Issue	Objective	Decision Making Criteria
		<p>function and grow in harmony together?</p> <ul style="list-style-type: none"> ▪ Will it reduce poverty? ▪ Will it reduce social exclusion? ▪ Will it promote diversity? ▪ Will it promote inclusion? ▪ Will it promote pride in the community? ▪ Will it reduce the inequality in educational attainment?'
Economic Activity	7.1 Help people gain access to a range of employment and training opportunities	<ul style="list-style-type: none"> ▪ Will it provide training and education opportunities for people of all ages, skills and abilities? ▪ Will it support provision of skilled employees to the economy? ▪ Will it support the growth of a range of sustainable employment sectors? ▪ Will it provide opportunities for local people to work in Fenland? ▪ Will it improve access to employment by means other than the car? ▪ Will it improve educational attainment?'
	7.2 Support investment in people, places, communications and other infrastructure to improve the efficiency, competitiveness, vitality and adaptability of the local economy	<ul style="list-style-type: none"> ▪ Will it encourage businesses development? ▪ Will it encourage aspiration and create opportunities? ▪ Will it improve the level of investment in key community services and infrastructure? ▪ Will it support provision of key communications infrastructure, including broadband? ▪ Will it improve business development and enhance competitiveness? ▪ Will it enable opportunities to encourage growth in tourism? ▪ Will it support the vitality and viability of market town centres? ▪ Will it support the rural economy? ▪ Will it improve skills?

2. INTRODUCTION

Fenland District Council is preparing Development Plan Documents (DPD) as part of the Local Development Framework (LDF). The preparation of each DPD will be subject to a full Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA).

The sustainability appraisal framework set out in this report will be used to appraise Fenland's Core Strategy DPD (including Development Management policies), the Site Specific Allocations DPD and any supplementary planning documents (where required). Throughout this report, the term 'SA' is used to refer to Sustainability Appraisal incorporating Strategic Environmental Assessment.

Article 5.4 of the SEA Directive requires that authorities with specific environmental responsibilities (Natural England, English Heritage and the Environment Agency) should be consulted when deciding the scope and level of detail of the information to be included in the report of the assessment process (scoping report). However, the Council widened the consultation on the scoping report to also include stakeholders representing social, economic and environmental interests. This final report has been amended to reflect the many comments we received as a result of the 5 week consultation that took place between 18th November and 23rd December 2010. We have produced a consultation report that provides a summary of the comments received, our responses and how we have made changes to the consultation version of the Scoping report.

2.1 How to use the Scoping Report

The scoping report has been split into topics based around social, environmental and economic sustainability themes. The topics are: Land and Water Resources, Biodiversity, Landscape, townscape and archaeology, Climate Change and Flood risk, Pollution, Healthy, Inclusive and Accessible Communities and Economic Activity. This means that you can go to the topic you are interested in and read about the sustainability context; the key sustainability objectives; the current and (likely) future sustainability baseline situation; the issues that we think should be a particular focus of the appraisal; and whether we think there are any evidence gaps. Chapter 11 sets out the Sustainability Appraisal Framework with possible indicators that will be used to monitor significant positive and negative effects.

3. BACKGROUND

3.1 Why do we need to undertake Sustainability Appraisal?

Public authorities are required to undertake an 'environmental assessment' of plans and programmes that are likely to have a significant effect upon the environment. This process is referred to commonly as 'strategic environmental assessment' (SEA). Among the documents to which this requirement will apply are the Development Plan Documents to be prepared as part of the Fenland Local Development Framework.

At the same time, the Planning and Compulsory Purchase Act (2004) requires sustainability appraisal (SA) of all emerging Local Development Documents and some Supplementary Planning Documents (depending upon their scope and likely significance). Sustainability appraisal and SEA are similar processes that involve a comparable series of steps. SEA focuses on environmental effects whereas sustainability appraisal is concerned with the full range of environmental, social and economic matters.

In principle, supplementary planning documents should not be subject to the SEA Directive or require sustainability appraisal because they do not normally introduce new policies or proposals or modify planning documents which have already been subject to sustainability appraisal. However, a supplementary planning document may occasionally be found likely to give rise to significant effects which have not been formally assessed in the context of a higher-level planning document.

Supplementary planning documents can take a number of forms but generally can be categorised into two broad types:

- Area based supplementary planning documents. These include master plans and development briefs which deal with a specific parcel or parcels of land
- Topic based supplementary planning documents. These provide additional information on a specific local issue, such as a design guide.

Most topic based supplementary planning documents, for example a shop front design guide, are unlikely to require a sustainability appraisal as they are unlikely to have significant environmental effects. However, it is conceivable that an area based supplementary planning document may have significant environmental effects. If this is the case, we will need to determine whether these effects have been appraised in a higher level (local) planning document such as a core strategy or saved local plan and assess whether or not the higher level appraisal adequately appraises the significant effects. If the answer is "no", it is likely we will need to undertake a new sustainability appraisal. This could be informed by the higher level appraisal.

This Scoping Report (and the appraisal reports to be read with it) uses an approach that addresses the requirements of SEA and sustainability appraisal simultaneously, by giving full consideration to environmental issues whilst also addressing socio-economic concerns. In terms of the specific requirements of the Directive, the Scoping Report and the relevant Final Appraisal Report will together meet the need for an 'Environmental Report' setting out the likely significant effects on the environment of implementing the plan (and the reasonable alternatives that have been considered).

3.2 Sustainability Appraisal undertaken between 2005 and 2007

Work has been undertaken since July 2005 on the Fenland LDF including two drafts of Core Strategy Preferred Options. All of this work was influenced by Sustainability Appraisal. However, due to a lack of sound evidence that could justify the preferred approach, highlighted in a range of objections from statutory bodies and other consultees, the decision was taken to work on building up an evidence base.

The scope of the appraisal was defined in an SA Scoping Report, which was subject to consultation with statutory consultees and other stakeholders in July 2005. This set out the context and objectives for the SA, collected baseline data and identified key issues / problems for the district. SA Objectives (known as the SA Framework) were formulated as a result of the Scoping exercise, which are set out in the initial SA report. No new data collection was carried out as part of the initial SA. Appendix 6 of the Scoping Report identifies where there are gaps in baseline to be filled through future data collection.

The objectives against which the sustainability of the DPD has been assessed were developed by the Council and consulted on during the Scoping stage consultation. The SA Framework of objectives and decision-making criteria cover the full range of environmental impacts stipulated by the SEA Directive and Regulations, and the broad range of economic and social issues proposed in current guidance on SA.

3.3 Shaping Fenland's Future

The aim of the Shaping Fenland project is to create a vision that will inform the activities and investment of key public and private sector businesses in the District over the next 20 years and into the future. This work will inform preparation of the new LDF, particularly the vision and strategic locations for growth elements of the Core Strategy; and it is for this reason that we are updating the sustainability appraisal work undertaken between 2005 and 2007.

The district is expected to grow significantly over the next 20 years and beyond, and therefore it needs to be ready to accommodate this growth in a sustainable way. This growth will not only be in housing and population but also in economic activity and infrastructure.

Social, economic and environmental aspects are equally important as the Council and its partners address health inequalities, education and skills deficits, an ageing population and additional migration into Fenland along with the impact of climate change.

3.4 –The Fenland Sustainable Community Strategy for 2009 - 2012

The Fenland Sustainable Community Strategy (SCS) sets out the strategic vision for Fenland. It provides the vehicle for considering and deciding how to address difficult crosscutting issues such as the economic future, health and wellbeing and social exclusion. The SCS is at the heart of creating sustainable development at the local level. Therefore, it is essential that the LDF should closely relate to the SCS.

Throughout this scoping report, we will identify the relevant themes of the SCS to help to shape the SA objectives.

3.5 SA workshop 15th July 2010

In July 2010, statutory consultees and other bodies were invited to attend a workshop to discuss the key sustainability issues facing Fenland. Of the Statutory consultees, only Natural England could attend but we have since received feedback from the Environment Agency and English Heritage. In the workshop, we had an in-depth discussion of the issues facing Fenland; and explored whether the key issues and objectives highlighted in the 2005 scoping report required re-thinking and updating. All of this information has been used to develop the scope of the sustainability appraisal.

3.6 What is the Purpose of this Scoping Report?

This Scoping Report marks the first stage of an integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) to establish the sustainability implications of Fenland's Development Plan Documents (DPDs).

The purpose of this SA Scoping Report is to set out the scope and level of detail of the SA. It provides information on the appraisal that will be carried out to assess the sustainability implications of our Development Plan Documents. It describes the other plans and programmes that will be taken into account in the development of the DPDs; the characteristics of Fenland and its current state and likely evolution without the DPDs; the social, environmental and economic issues which will need to be considered; and the framework that will be used to assess the DPD and the reasonable alternatives considered in their preparation.

The SA will combine assessment processes required by the Strategic Environmental Assessment into the broad sustainability appraisal process, together with Equality Impact Assessment, which is an examination of the strategy's impacts on groups including women, older people and ethnic minorities.

In accordance with the Habitats Regulations, Appropriate Assessment will examine whether the plan will have a significant effect on Natura 2000 sites: Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); and also areas designated as globally important wetlands under the Ramsar Convention (1971) (Ramsar Sites). This will be undertaken in a separate but parallel process to the SA.

3.7 Scoping Stage (Current Stage) - How we have undertaken the work and presented our Findings

The scoping work has been undertaken and presented using the methodology and layout used in the integrated sustainability appraisal of the RSS review (May 2008 Scoping report). Relevant data has also been used from that appraisal to avoid duplication of work.

The scoping stage involves reviewing available evidence in order to identify what should fall within the scope of the sustainability appraisal, i.e. which issues should be the focus of the assessment and which should not. This work has resulted in a

sustainability framework that we can use to assess our emerging plans. The scoping process has been structured around the following questions:

- What is the sustainability context?
- What are the key sustainability objectives we need to consider?
- What is the current and (likely) future sustainability baseline?
- What are the issues that should be a particular focus of the appraisal?
- Are there any evidence gaps?

To help focus the SA scoping stage, we have identified seven sustainability themes:

- Land and Water Resources
- Landscape, townscape and archaeology
- Biodiversity
- Climate Change and Flood risk
- Pollution
- Healthy, Inclusive and Accessible Communities
- Economic Activity

These themes have emerged from the SEA topics; from an in depth discussion of the local issues at the SA workshop held with the key stakeholders in July 2010; from the Fenland's Sustainable Community Strategy; and the Shaping Fenland's Future work to date. We have prepared a chapter on each theme for ease of reference and to allow stakeholders to focus on the elements that they are interested in. Set out below is a description of the information contained within each theme based chapter.

What is the sustainability context?

The production of the Fenland Local Development Framework needs to take into account a wide range of other plans and programmes. These may contain policy objectives or specific requirements that need to be addressed through our new development plan documents. Identifying and reviewing these documents is an important element of the sustainability appraisal (and SEA) process, as it can help to shape the objectives against which emerging policies should be appraised, as well as pointing to particular issues and problems that need to be tackled.

This section in each theme based chapter of this report includes a summary of key implications from the plans, policies and strategies. The context review meets the requirement of Annex I (a) of the SEA Directive that the process must report the following: *“an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes”*.

What is the current and (likely) future sustainability baseline?

This section takes a snap-shot of the current sustainability 'baseline' as it relates to each sustainability topic in Fenland; and looks, where possible, how the baseline has evolved over time and how it might continue to evolve under a business as usual scenario. This section meets the requirements of Annex I (b) and 1 (c) of the SEA Directive to report the following: *“the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme” (Annex 1(b)) “the environmental characteristics of areas likely to be significantly affected” (Annex I(c))*.

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

Following from the review of evidence undertaken under the preceding headings, this section describes those sustainability issues that can be shown to be potentially significant, and so should be a particular focus of the assessment stage. At this stage, some issues are scoped out as being less significant, or not within the remit of the LDF to address.

This section meets the requirement of Annex I(d) of the SEA Directive to report the following: *“any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC”* [NB problems relating to European sites are addressed through the HRA / AA].

Are there any evidence gaps?

The collection, analysis and communication of data are important components of Sustainability Appraisal. However, there are cases where a need for a particular piece of evidence is recognised (in order to lend proof to sustainability issues), but the evidence is not available. In these cases it is important that these gaps are highlighted so that there is the possibility to gather evidence (including qualitative evidence) through consultation.

This section meets the requirement of Annex I(h) of the SEA Directive to report: *“an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information”*.

3.8 The Next Steps

Following public consultation on this scoping report, we will take into account all comments received and make any necessary changes to the scope of the appraisal and the SA Framework. We will then use the framework to appraise the emerging Development Plan Documents for any significant effects.

Appraisal and Reporting

All sections of the development plan documents will be appraised, including all reasonable alternatives. The findings of our sustainability appraisals will be documented in an Integrated Sustainability Appraisal (ISA) Reports. The reports will incorporate the information that must be included in the ‘Environmental Report’ required under the SEA Directive Annex I.

Further Consultation

Each draft development plan document and associated Sustainability Appraisal report(s) will be subject to consultation with the environmental bodies and the public. The final reports will be examined in public by an independent inspector.

Monitoring

Following the adoption of development plan documents we will monitor their implementation through the Annual Monitoring Report (AMR). In order to effectively monitor the policies in the LDF, a series of indicators will be developed. In line with the requirements of the SEA Directive, the indicators must include measures for monitoring the significant environmental effects of the LDF (as identified through the appraisal process).

4. LAND AND WATER RESOURCES

4.1 What is the Sustainability Context?

Fenland's Sustainable Communities Strategy 2009 - 2012

A relevant SCS theme is 'a cleaner and greener district, which everybody can enjoy'. Under this theme, there are two priorities. Priority two aims to make energy, water and resource use more sustainable.

Cambridgeshire County Council's Climate Change and Environment Action Plan (CCC, 2008)

The Action Plan accompanies the Cambridgeshire Climate Change and Environment Strategy (2008). One of the action outcomes is to deliver appropriate water infrastructure in Cambridgeshire, as set out in the Water Cycle Strategy for Cambridge sub region.

Emerging Peterborough and Cambridgeshire Minerals and Waste LDF

Cambridgeshire County Council and Peterborough City Council are working together to prepare a local development framework that will address spatial planning in respect of the production and movement of minerals and the management of waste. The main challenges for minerals and waste planning include the need to ensure that the minerals required to support the planned level of growth are available at the right time, and that worked land can be restored to a beneficial after use. With regard to waste, the central challenge will be to secure new facilities to change the way in which waste is managed in the plan area, including new development areas, through a network of sustainable waste management facilities.

The proposals outlined in the emerging Cambridgeshire and Peterborough Minerals and Waste Local Development Framework are important for Fenland District. For example there will be significant green infrastructure created following restoration in the Block Fen/Langwood Fen area.

The Minerals and Waste Development Plan has been examined by the Planning Inspectorate and will eventually replace the existing Minerals (Aggregates) and Waste Local Plans.

Cambridgeshire Aggregates (Minerals) Local Plan, (CCC 1991)

This plan includes objectives on minimising the adverse environmental effects of mineral extraction. Buffer zones are in place to protect the County's resources.

The East of England Plan (2008)

The East of England Plan was abolished by Government. However, the policies on Water Efficiency and Integrated Water Management, give a good policy steer. The water efficiency policy seeks to ensure that development in the spatial strategy is matched with improvements in water efficiency, and that there is a progressive, year on year, reduction in per capita consumption rates. The integrated water management policy compels local authorities to work with partners and take account of river basin management plans, CAMS, groundwater vulnerability maps, groundwater source protection zone maps, proposals for water abstraction and

storage and the need to avoid adverse effects on sites of European importance for wildlife.

Sustainable Communities Plan, ODPM (2003)

The Sustainable Communities Plan (SCP) assigned a major role to English Partnerships (EP) in finding and assembling brownfield land for sustainable development. The SCP refers to the development of a national brownfield strategy by EP with the specific aim of bringing a significant proportion of previously developed land (PDL) back into beneficial use.

Barker Review of Housing Supply

The review of housing supply reported by Kate Barker in 2004 set out a series of policy recommendations to address the lack of supply and responsiveness of the housing provision in the UK. The Barker review identifies a number of important issues such as:

- 69% of brownfield land is not suitable for housing development for various reasons;
- 32% is subject to regulatory constraints e.g. flood risk, green belt;
- 58% in areas with weak housing markets; and
- Of the remaining 31% free from regulatory and market driven constraints the majority is already in use.

The estimates put forward are that there is only 11% (7,330 ha) available for development. Whilst recognising the importance of exercising preference in favour of brownfield land, the Barker Review was concerned that over-concentration of this aspect might restrict the supply of housing or in other words, the prioritisation of brownfield land could be used as an obstruction to development, rather than a means of encouraging it.

PPS3: Housing

Planning Policy Statement 3 states as an annual target that at least 60% of new housing should be provided on previously developed land, in order to use land effectively and minimise encroachment on greenfield land. The report states:

“the national annual target is that at least 60% of new housing should be provided on previously developed land. This includes land and buildings that are vacant or derelict as well as land that is currently in use but which has potential for redevelopment. When identifying previously-developed land for housing development, Local Planning Authorities and Regional Planning Bodies will, in particular, need to consider sustainability issues as some sites will not necessarily be suitable for housing.”

PPS7: Sustainable development in rural areas

PPS7: Sustainable Development in Rural Areas, indicates that high quality agricultural land (i.e. best and most versatile, grades 1, 2, and 3a of the Agricultural Land Classification) should, where possible, be protected from irreversible damage.

PPS23: Planning and Pollution Control

The Government expects LPAs to adopt a strategic approach to integrate their land use planning processes with plans and strategies for the control, mitigation and removal of pollution, as far as it is possible and practicable to do so. The overall aim of PPS23 is to ensure the sustainable and beneficial use of land (and in particular encouraging reuse of previously developed land in preference to greenfield sites). Within this aim, polluting activities that are necessary for society and the economy should be so sited and planned, and subject to such planning conditions, that their adverse effects are minimised and contained to within acceptable limits. Opportunities should be taken wherever possible to use the development process to assist and encourage the remediation of land already affected by contamination.

Local authorities must ensure that where development would be located on brownfield land that appropriate assessment of possible contamination is undertaken and ensure that, where necessary, remediation is carried out.

Our Towns and Cities: The Future – Delivering an Urban Renaissance

This White Paper built on the Urban Task Force's 1998 report (which discusses causes of urban decline and recommends solutions to bring people back into towns and cities) by setting out a vision for urban renaissance to make towns and cities vibrant and successful places. Aspects of this included redeveloping brownfield land, better maintenance of streets and buildings and good quality services.

Better Quality of Life: a strategy for sustainable development for the United Kingdom

Although now superseded, the importance of minimising the loss of the soil resource and maintaining and enhancing soil quality was identified. The Government also stated the aim of bringing into force a new Contaminated Land regime to help local authorities identify problem sites that require their remediation.

Brownfield Land Action Plan (BLAP)

The BLAP was prepared to better understand, at a local level, the range of actions and interventions that will be required to secure the fullest contribution from the re-use of previously developed land (PDL) to delivering regional strategic objectives in the relevant areas.

The First Soil Strategy for England

The *First Soil Action Plan for England* bases its objectives on the principles of extent of soil, diversity of soil and quality of soil and identifies actions for sustainable soil management. A draft Soil Strategy for England was prepared and issued for consultation in March 2008, and will succeed the First Soil Action Plan for England.

The Brownfield Guide: a practitioner's guide to land reuse in England

The guide considers the issues affecting the reuse of land and examines the existing policies and other mechanisms available to assist in the process of unlocking sites. It is intended to be used as a reference document for practitioners, to set out exemplar and best practice approaches to land reuse, and disseminate lessons learned from a programme of brownfield pilot projects.

Water Resources Act 1991

The act requires the protection of the quantity and quality of water resources and aquatic habitats. Parts have been amended by the Water Act 2003.

Water Act 2003

The act Implements changes to the water abstraction management system and to regulatory arrangements to make water use more sustainable.

Water Framework Directive (WFD) 2000/60/EC

The WFD was passed into UK law in 2003. The overall requirement of the directive is that all river basins must achieve 'good ecological status' by 2015 or by 2027 if there are grounds for derogation. The WFD, for the first time, combines water quantity and water quality issues together. An integrated approach to the management of all freshwater bodies, groundwater, estuaries and coastal waters at the river basin level has been adopted. The Environment Agency is the body responsible for the implementation of the WFD in the UK.

Future Water: the Government's Water Strategy for England

Future Water: the Government's Water Strategy for England (2008) sets out the Government's vision for how the water sector will look by 2030 and some of the steps necessary to achieve it. The Strategy addresses a range of water-related issues including managing water demand through increased water efficiency and reduced water wastage; enhancing future water supply through new infrastructure; addressing water quality through tackling pollution; managing surface water runoff through sustainable drainage; and managing river and coastal flood risk. The strategy states the aspiration that, by 2030, average domestic consumption will fall to 130 l/h/d.

Catchment Abstraction Management Strategies (CAMS)

CAMS enable the consideration of how much water can be abstracted from watercourses without damaging the environment within a catchment – the most appropriate scale for planning for water.

Water Resource Management Plans

Water resources management plans have been made a statutory requirement through the Water Act (2003). Accordingly, companies have recently submitted draft water resources management plans which have been under consultation during the autumn of 2008.

Since the last round of publication (2004), the water 'policy context' has changed significantly, and the Environment Agency now state that they now expect companies

to consider the growth forecasts from new development, as well as water efficiency initiatives including the Code for Sustainable Homes, imminent building regulations, increased metering rates in areas of significant water stress, OFWAT's water efficiency targets and the publication of DEFRA's strategy for water use. This means that the demand forecasts presented as part of the 2009 draft Water Resources Management Plans look considerably different to those in 2004.

Code for Sustainable Homes

The Code is the national standard for the sustainable design and construction of new homes. The Code aims to reduce our carbon emissions and measures the sustainability of a new home against categories of sustainable design, rating the 'whole home' as a complete package. The Code uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. The Code sets minimum standards for energy and water use at each level. One aspect of which is the efficient use of water. All affordable housing must be constructed to code level 3, which is set at 105 l/h/d for internal use for an average year. Currently it is as yet unsure whether Code 4 will become mandatory as part of the next funding round.

For private housing: A minimum 'nil' rating has been required since last year. From 2011 this is scheduled to be Code level 3, level 4 from 2013 and level 6 from 2016.

The East of England Implementation Plan (EEIP)

The EEIP has policies on all new homes achieving code level 3 of 105l/h/d plus an allowance for external water use, bringing the target for per capita consumption (pcc) to 115 l/h/d. The plan also has an ambitious target of reducing average pcc (for both measured and unmeasured customers) to 120 l/h/d by 2030.

Water efficiency

Anglian Water has advised that when implementing water reuse technology there are 3 areas that need careful consideration to ensure it is used for the right reasons:

1. Saving water is the initial consideration for utilising a water reuse system and whilst the theory is strong evidence to demonstrate CSH level savings is low.
2. Impact on carbon be it embedded carbon or ongoing carbon use through the use of pumps controls etc are normally a secondary consideration over saving potable water. The NHBC Foundation commissioned research which indicates that few systems can match public mains water for carbon use.
3. The last least area to be given consideration is public health. As a recent incident in the East of England has highlighted, public awareness to the risks from these systems is low, also of concern is the awareness from some areas of the plumbing fraternity as it was shown that regulatory requirements had not been adhered to. Whilst the initial installation can be better regulated to ensure compliance at this stage, there still remains concern for follow-on routine maintenance where plumbers are asked to solve problems that occur but have low awareness of the risks or regulatory requirements. This is a key area that need addressed before wide scale implementation of these types of systems is seen.

In 2008 OFWAT published its intention to set water efficiency targets at two rates:

- Companies with average pcc greater than 130 l/h/d, a reduction of 1litre per property per day
- Companies with average pcc less than 130 l/h/d, a reduction of 0.5 litres per property per day

These targets will be incorporated into water company water resources management plans.

4.2 What is the baseline situation?

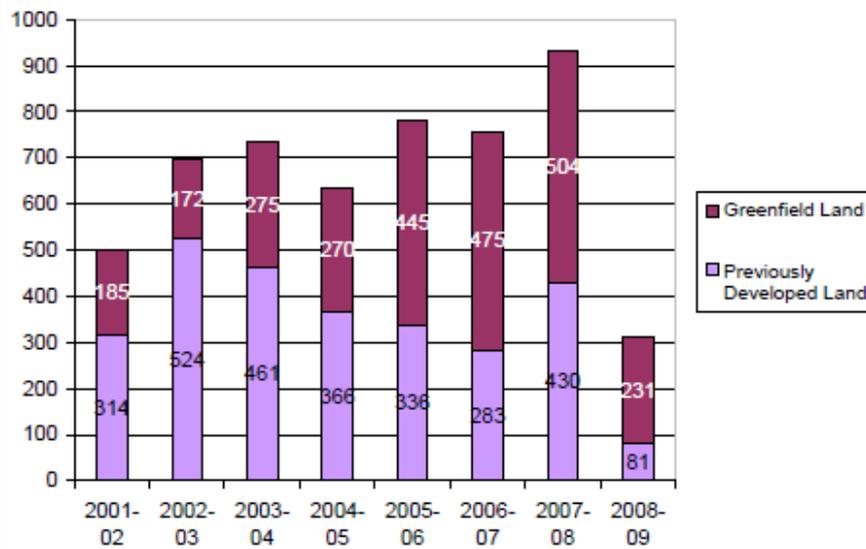
This section takes a snap-shot of the current sustainability 'baseline' as it relates to land and water in Fenland, as well as considering how the baseline has evolved over time and how it might continue to evolve under a business as usual scenario. This section meets a key requirement of the SEA Directive. An important element of the SEA Directive requirements is the provision of information on “the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme” and “the environmental characteristics of areas likely to be significantly affected”.

Dwelling completions on Previously Developed Land

The results of the NLUD Previously Developed Land Survey undertaken in April 2009, show that the district has 55 hectares of previously developed land available.

Paragraph 40 of PPS3 states that a key objective for Local Planning Authorities is to make effective use of land by reusing previously developed land. It specifies that the national annual target is that at least 60 per cent of new housing should be provided on previously developed land. Figure 1 shows dwelling completion totals for the period 2001-09 broken down by those that have taken place on previously developed land (“brownfield”); and those which have taken place on previously undeveloped land (“greenfield”).

Figure 1 – Dwelling Completions on previously developed land

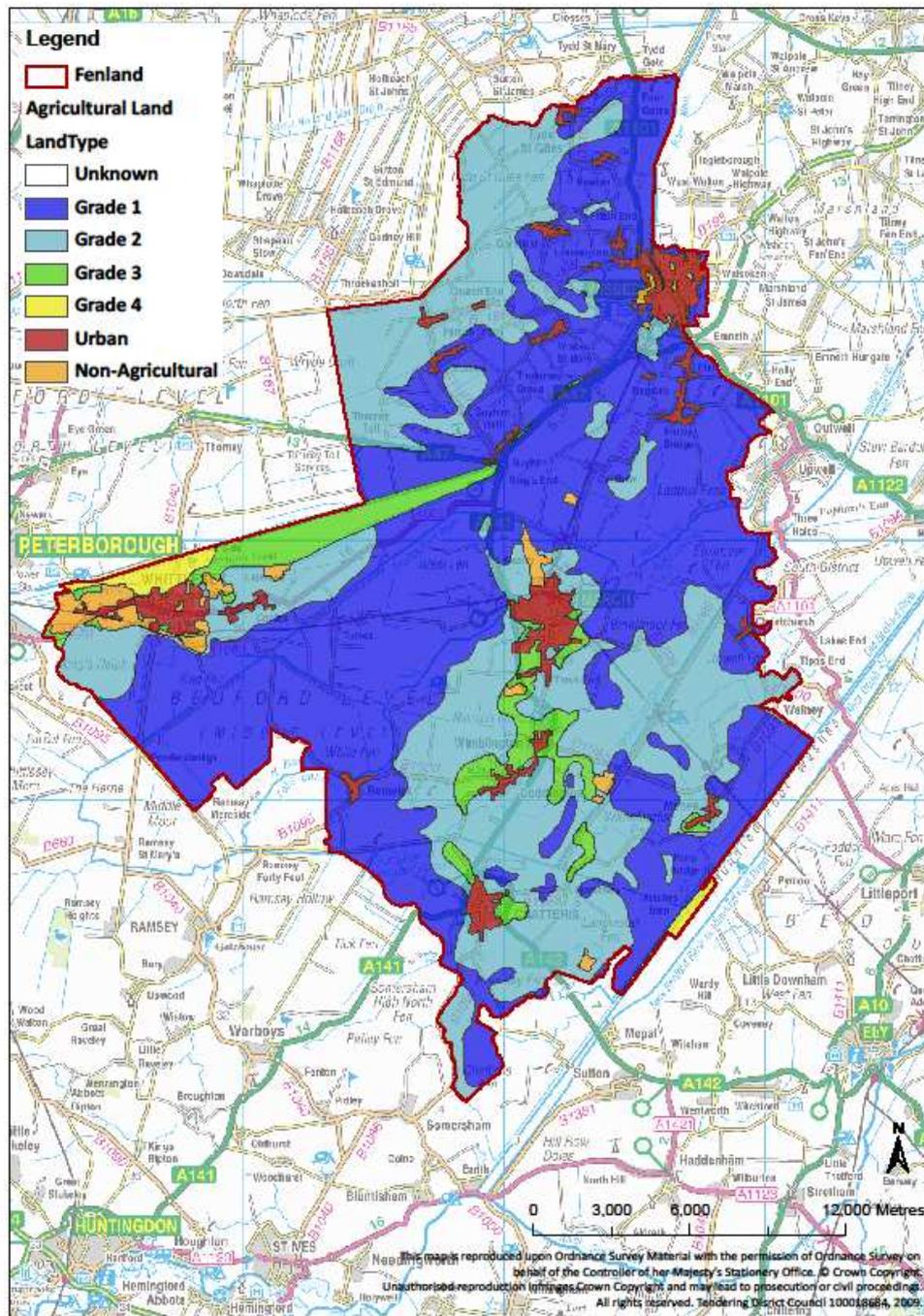


Source: Strategic Housing Land Availability Assessment 2009, Fenland District Council

Agricultural Land, Forestry and Soil Quality

Almost the whole of the District comprises high grade agricultural land (figure 2), and much of this is Grade 1 (the best and most versatile). The loss of these assets is a major environmental issue. The Agricultural Land Classification is a basis for assessing how development proposals affect agriculture within the planning system, but it is not the sole consideration. We are guided by PPS7 to also take into account the value of land in agriculture, for example for its environmental or heritage attributes. Other factors include impact on farm size and structure, use of buildings and other fixed equipment (including irrigation and drainage), or any stimulus the development might give to rural economic activity, for example in demand for renewable energy.

Figure 2 – Agricultural Land Classification in Fenland District. Source Secm 2010



Fenland does not fall within a catchment sensitive farming area.

Water Resource Availability

The District lies in one of the driest parts of the country for rainfall, although the very low-lying nature of the land means that flood risk is high in the district.

Water is transferred from the River Nene system into the Middle Level Commissioners' system during dry periods. This is to maintain the statutory

navigation depth within that system, but is challenged by existing irrigation and abstraction licences which lower water levels.

Drinking water supply comes from Anglian Water boreholes in Norfolk or from Rutland Water Reservoir to the north west. The impact of climate change may amplify water supply issues.

A Water Cycle Strategy helps to balance the requirements of various planning policy documents, and ensure that land-use planning and water cycle infrastructure provision is sustainable. A Water Cycle Study has been commissioned by Cambridgeshire Horizons jointly for FDC and East Cambridgeshire DC to identify whether sufficient water supply and waste water infrastructure is in place to support the growth and development projected in both districts. At the time of writing, Scott Wilson is working on the outline phase. The key aim of the Outline Water Cycle Study is to define the baseline capacity of both the water environment and the water services infrastructure in each district. This will identify the key environmental and infrastructure constraints and identify approximately how many new dwellings and jobs can be provided at each development area before new infrastructure or mitigation is required. Where there is insufficient capacity, the Outline Study then provides an Outline strategy for providing solutions or mitigation to allow development to proceed in a sustainable way.

The Detailed WCS phase is dependent on the determination of favoured growth option locations, as until it is known where development is to be located; there will remain a number of permutations of how development areas can be brought forward which could change the requirement on site specific infrastructure such as sewerage connections and water supply pipes.

Drainage

When drainage of the Fens commenced in the 1700's all that was available to move the water were numerous windmills strategically placed over the district. Over time the introduction of steam and then diesel power enabled the water to be moved more efficiently. Today's fully automatic diesel and electrically powered pumps have enabled Engineers to have far more control over the drainage of the Fens.

These advances have also made it possible to retain water in the summer months for irrigation of crops and the enhancement of the drainage environment, being home to a variety of birds and wildlife.

The Middle Level Commissioners (MLC) and North Level Commissioners operate the IDBs within Fenland. The main responsibility of Internal Drainage Boards (IDBs) is to maintain the watercourses designated to each IDB to prevent flooding within the board's district. IDBs are normally formed by members elected from agricultural ratepayers by Special Levy paying Local Authorities. They have permissive powers to undertake maintenance and choose to exercise their powers on Designated Main Drains. Permissive powers means that the IDBs are permitted to undertake works on ordinary watercourses but the responsibility remains with the riparian owner as the IDB are not obligated.

The IDBs have a role in the development control process and pre-application discussions. The North Level District IDB has 14 elected farmer representatives plus

6 Fenland District Council representatives with a further 5 from Peterborough City and 3 from South Holland District Council.

Sewerage

Sewerage undertakers are responsible for surface water and foul drainage from developments, where this is adopted via adopted sewers. Under the Water Industry Act 1991 sewerage undertakers are legally obliged to take on both surface and foul water from new developments. Anglian Water is the only sewerage undertaker within the district. There are some recent changes to the role and duties through the Flood and Water Management Act 2010 although these have yet to be formalised.

Water Quality

The Environment Agency has suggested that the Water Framework Directive (WFD 2000/60/EC) as detailed in section 4.1 should be appropriately reflected within the Sustainability Appraisal Framework (section 11.1) as a separate objective. The reason for this is that the WFD stipulates the requirement for member states to ensure there is no detriment to water quality as a result of economic activity. There is evidence available against which Fenland District Council can measure the relative success to meet this objective. The Environment Agency undertake river water quality assessments and produce annual reports as to our compliance with the WFD and would be able to supply this information.

Minerals, Sand and Gravel

There are areas of mineral resources, sand and gravel aggregates in the South of the District near Chatteris and brick clay workings in the west around Whittlesey, that must be protected from being sterilised by inappropriate forms of development. The Cambridgeshire and Peterborough Minerals and Waste Local Development Framework documents are being prepared. These will act as a mechanism to protect resources in the district.

4.3 What are the issues that should be a particular focus of the appraisal?

- Impact of growth on high grade agricultural land. Maximising Fenland's brownfield resource, and accommodating residual growth in sustainable Greenfield locations.
- Water stress and the need for careful planning - There is a need for the location of development to take account of areas where there is existing pressure on the water environment or potential for impacts on sensitive environments. There is also a need to take account of the location and available capacity of water infrastructure. Finally, there can be benefits to positively promoting initiatives to improve water quality through good catchment management.
- Water efficiency

- Waste water treatment

4.4 What are the key sustainability objectives we need to consider?

From these key issues we have formulated the following objectives relating to land and water resources:

- Minimise the irreversible loss of undeveloped land, productive agricultural land
- Increase water efficiency and limit water consumption to levels supportable by natural processes and storage systems

A separate theme on pollution examines alleviating diffuse and point source water pollution.

See chapter 11 for the SA Framework that includes the objectives and decision making criteria.

4.5 Evidence Gaps

The following points are highlighted in relation to data gaps:

- Rates of development on/loss of best and most versatile agricultural land
- Contaminated land data
- Outline and Detailed Water Cycle Study.

5. BIODIVERSITY

5.1 What is Biodiversity?

Biodiversity is the variety of life forms, also referred to as the "web of life" and the "Wealth of Wildlife" that surrounds us. This includes:

- variety between different plant and animal species, the sheer amount of different life forms
- variety within one species - for example local varieties of apples and other orchard fruits
- variety of whole ecosystems, such as woodlands, wetlands and grasslands

Biodiversity is important, not only because nature provides us with resources such as food, medicine and materials, but also because it provides us with ecological services, such as flood protection and clean air. Biodiversity also has aesthetic and cultural value for recreation and enjoyment¹.

5.2 What is the Sustainability Context?

Fenland's Sustainable Community Strategy 2009 - 2012

A relevant theme is 'A cleaner and greener district, which everybody can enjoy'. Priority 1 'Green Spaces in Fenland' looks to improve the quality and quantity of green spaces in Fenland; enhance community management of green spaces; and improve access to green spaces.

International and National commitments

Relevant international and national legislation includes the:

- The Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations) which consolidate the various amendments made to the Conservation (Natural Habitats & c.) Regulations 1994; the 1994 Regulations transposed the Council Directive 92/43/EEC. All Local Authorities have a duty to have regard to the requirements of the Habitats Directive in exercising their functions as set out in Regulation 9 (5). European Protected Species are animals and plants that receive protection under The Conservation of Habitats and Species Regulations 2010.
- Directive 2009/147/EC of the conservation of wild birds (This has replaced and superseded the [Wild] Birds Directive [79/409/EEC]) - protection of all naturally occurring wild bird species and their habitats. The directive recognises that habitat loss and degradation are the most serious threats to the conservation of wild birds. It therefore places great emphasis on the protection of habitats for endangered as well as migratory species

¹ Definitions and information taken from the Cambridgeshire and Peterborough Biodiversity Partnership website http://www.cpbiodiversity.org.uk/what_is_biodiversity.php (1/09/2010)

- Habitats and Species Directive (92/43/EEC) – lists natural habitats and species that must be conserved, using measures to maintain or restore their ‘favourable conservation status’⁵; and
- Ramsar Convention on Wetlands of International Importance (1971) – a commitment by the signatories to conserve wetlands of international importance, especially as waterfowl habitat;
- Water Framework Directive (2000/60/EC) – following transposition of the Directive, the UK must 2003 aim to reach good chemical and ecological status in inland and coastal waters by 2015.
- The Wildlife and Countryside Act 1981 (as amended)

During the Earth Summit at Rio de Janeiro in 1992 one hundred and fifty nations (among them the United Kingdom) signed the Convention on Biological Diversity (CBD). A principal objective of the CBD is the conservation of biodiversity. The UK Government is committed to rehabilitating and restoring degraded ecosystems and promote the recovery of threatened species; and halting biodiversity loss by 2010 and putting biodiversity ‘on the course to recovery’.² It is now likely that the UK will miss this target.³ Commitment to the CBD also led to the preparation of the 1994 UK Biodiversity Action Plan (UK BAP), which identifies our most threatened habitats and species and includes action plans with ambitious targets for their recovery.

Biodiversity Action Plans

On a national level, the UK Action Plan for biodiversity was launched in 1994. Since then, working groups produced and reviewed action plans for nationally important species and habitats. The England Biodiversity Strategy sets out the framework for England, and is advocating landscape scale delivery. The species and habitats on the UK Biodiversity Action Plans form the basis of Cambridgeshire and Peterborough's action plans (see next section), along with other locally important habitats and species.

Natural Environment and Rural Communities Act 2006

The Act placed a duty on public authorities to have regard to the conservation of biodiversity in exercising their functions. The Duty aims to raise the profile and visibility of biodiversity and to make it a natural and integral part of policy and decision-making. Natural England has produced a list of Habitats and Species of Principal Importance in accordance with Section 41 of the Act. This list is intended to be used as a guide when implementing the biodiversity duty.

PPS1: Delivering Sustainable Communities

PPS1 advises that planning policies should seek to protect and enhance the quality, character and amenity value of the countryside and a high level of protection should be given to valued landscapes, wildlife habitats and natural resources. PPS1 goes on to state that planning should seek to maintain and improve the local environment

² The European Commission's Communication on "Halting the loss of biodiversity by 2010 – and beyond". 22 May 2006, Brussels.

³ EASC (2008) *Halting Biodiversity Loss*

through positive policies on issues such as design, conservation and the provision of public space.

PPS9: Biodiversity and Geological Conservation

PPS9 recognises that biodiversity can contribute to urban and rural enhancement as part of green spaces and as part of developments and can positively contribute to quality of life. As well as promoting the protection and enhancement of international sites, SSSIs, regional and local sites, ancient woodland, previously developed land and biodiversity within developments, PPS9 also promotes the protection of habitat/ecological networks and biodiversity in the wider countryside. Local authorities in particular are tasked with maintaining networks by avoiding or repairing the fragmentation and isolation of natural habitats. PPS9 promotes a strategic approach recognising the contributions that sites, areas and features, both individually and in combination make to conserving biodiversity.

The England Biodiversity Strategy

A Biodiversity Strategy for England includes the broad aim that planning, construction, development and regeneration should have minimal impacts on biodiversity and enhance it wherever possible. The Strategy sets out the UK Government's vision for biodiversity in terms of ensuring that biodiversity considerations become embedded in all the main sectors of economic activity, public and private. The vision is:

“for a country – its landscapes and water bodies, coasts and seas, towns and cities – where living things and their habitats are part of healthy, functioning ecosystems; where we value our natural environment, where biodiversity is embedded in policies and decisions, and where more people enjoy, understand and act to improve the natural world about them.”

Public Service Agreement 28 and the Ecosystems Approach

The Government gave recognition to the importance of having a diverse, healthy and resilient natural environment by announcing a new cross-government Public Service Agreement 28 (PSA) to “secure a healthy natural environment for today and the future” (October 2007). DEFRA have produced an action plan identifying what needs to be delivered over the next period if the vision set out in PSA28 is to be achieved.¹² The PSA recognises the fact that the natural environment provides a wide range of benefits that are essential for human life. Related to the PSA, DEFRA has developed the ‘Ecosystem Approach’, which seeks to provide a framework for looking at whole ecosystems in decision making with an emphasis on valuing ecosystem services.¹³

Furthermore, an ecosystems approach should:

- be holistic, recognising the interconnectedness of natural and human systems;
- respect environmental limits, taking into account ecosystem functioning;
- Consider an appropriate spatial scale, recognising the cumulative nature of impacts

- Respond to environmental change over time through adaptive management

As part of the approach the Government has given consideration to how best to reconcile conserving a list of priority species (as required by the UK BAP) with the wider agenda of maintaining ecosystem services. The proposed UK approach focuses on maintaining, creating and restoring functional combinations of habitats. Healthy habitats in mosaics will deliver both ecosystem services and also homes for priority species.

Climate Change and Biodiversity Adaptation: the Role of the Spatial Planning System, Natural England, 2009

This policy document highlights that the ability for species to survive changing climatic conditions will be influenced by many factors other than just natural adaptability. Perhaps the most important of these will be the ability to disperse unhindered through robust networks of suitable habitat, avoiding physical barriers and hostile land uses, and for appropriate habitats to be accessible within areas where more favourable climatic conditions are encountered. Facilitating species' movement and enhancing the amount and distribution of suitable habitat should therefore be a key aspiration for spatial planning.

Left to natural processes, it is becoming clear that many species and habitat types will find it difficult or impossible to successfully adapt to climate change pressures without intervention. In the UK this intervention is likely to be primarily through direct land and habitat management and indirectly through spatial planning activity. The increase in rate of climate change over natural changes within significantly fragmented landscapes in which habitats are pressured or isolated, means that natural adaptation is less likely to be successful than it has been historically.

Increasingly, evidence suggests that within lowland England there are islands of rich and improving biodiversity interest reflecting localised sound conservation management, but that the outward spread of those species beyond those special sites is becoming more and more limited due to fragmented landscapes and loss of semi-natural spaces. To not take a positive and co-ordinated action that facilitates wildlife movement and colonisation to climate space may have very serious consequences in respect to future species abundance and distribution.

Biodiversity, Access and Recreation

The availability of recreational access to biodiversity is important in terms of 'quality of life', the health of Fenland's populations and also the economy. It is important to recognise however that there is also considerable potential for recreation to have significant impacts on biodiversity and habitats. This is a key consideration for strategic spatial planning, especially where European designated sites are involved. Careful strategic planning can help mitigate these impacts. For example, it may be feasible to plan for new recreational resources to buffer increased demand for access to the more sensitive sites.

Natural England promotes the importance of ensuring that sufficient account is taken of the 'recreational carrying capacity' of sites designated for their nature conservation value. They state that, although the need for provision of local green infrastructure for daily use by local communities is often well addressed as part of development, there is also a need to take account of the pressures that will be exerted from 'day and

weekend trippers' travelling from further afield. Natural England is keen to improve the evidence base so that issues relating to recreation and biodiversity can be better understood.

Natural England is testing a new Access to Natural Greenspace Standard ('ANGST') because access to high quality and biodiversity rich green / open-space is important in terms of health and well-being and to ensure that people value their local environments. This builds on the ANGST standard developed by English Nature and used in PPG17 as part of green space audits. The standard provides a clear guide for the provision of green space within regional and local authority development plans. The ANGST criteria are that:

- no person should live more than a 300m or a 5 minute walk from their nearest area of natural green space of at least 2 ha in size;
- there should be provision of at least 1 ha of Local Nature Reserve per 1,000 population;
- there should be at least one accessible 20 ha site within 2 km from home;
- there should be one accessible 100 ha site within 5 km; and
- there should be one accessible 500 ha site within 10 km.

There is a parallel standard for woodland provision developed by the Woodland Trust. The Woodland Access Standard advocates:

- that no person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size; and
- that there should also be at least one area of accessible woodland of no less than 20ha within 4km (8km roundtrip) of people's homes.

Green infrastructure

Green infrastructure is defined as 'a network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities' (page 5 of PPS 12).

A focus on green infrastructure provision is one important means of achieving landscape scale conservation. Natural England's position paper on housing growth and green infrastructure describes how it plays a major role in ensuring that housing growth is accommodated with minimum impact on the natural environment and delivers maximum benefits for the natural environment and people together.

Natural England has produced guidance on green infrastructure (2009). The guidance stresses the importance of early planning for green infrastructure and integrating green infrastructure strategies within spatial planning. It is targeted at anyone taking forward green infrastructure strategies, plans, policies and proposals especially local authorities, developers and other key partners.

The Landscape Institute has produced a position statement titled Green Infrastructure: Connected and Multifunctional Landscapes (April 2009). The Landscape Institute calls for Green Infrastructure to be afforded the same priority as more conventional infrastructural components; given its critical role in addressing a wide range of pressing environmental, social and economic challenges.

A draft Green Infrastructure Strategy has been prepared for Cambridgeshire (second Edition, 2010), which is currently under review and is expected to be adopted by mid 2011. This Strategy identifies the county-wide Green Infrastructure network where investment and delivery can bring about significant strategic benefits for people and wildlife.

How is biodiversity protected and managed?

Natural England aims to protect England's biodiversity in a number of ways:

- protecting the best wildlife sites,
- promoting the recovery of declining species and habitats,
- embedding biodiversity into all policy and decision-making,
- enthusing people,
- developing the evidence base, and
- working with others to deliver our goals.

Statutory designation

A key way of protecting our biodiversity is having a network of protected areas where organisms can thrive. These sites are known as 'designated sites' and preserve the best of England's wildlife.

- Nationally important sites for biodiversity are protected as Sites of Special Scientific Interest (SSSIs). Some SSSIs may also be National Nature Reserves (NNRs).
- Many SSSIs are also designated as 'International Sites' for their international importance. The designations are Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites.
- At Natural England, we are working with others to identify a network of Marine Protected Areas (MPAs) by 2012.
- Locally important sites for biodiversity may be declared as Local Nature Reserves (LNRs).
- Areas of Outstanding Natural Beauty (AONB) are designated to conserve and enhance the natural beauty of their landscapes.

Outside SSSIs

There are many threatened species and habitats that are not protected through designated sites. A series of laws and rules has been introduced to preserve these habitats and species. They include:

- The Wildlife and Countryside Act 1981 and the Conservation (Natural Habitats etc.) Regulations 1994 give protection to some of the most threatened species in England.
- The Hedgerows Regulations (1997)
- Environmental Impact Assessment (EIA) for uncultivated land and semi-natural areas (2002)
- Heather and Grass Burning Regulations and Code (2007) provide protection for habitats.
- Environmental protection is influenced by new European legislation such as the Environmental Liability Directive.

Designated Areas

Statutory designations

National and international statutory designations protecting England's natural environment:

- Sites of Special Scientific Interest (SSSI) protect the country's best wildlife and geological sites.
- Special Areas of Conservation (SAC) give special protection under the European Union's Habitats Directive to a variety of wild animals, plants and habitats.
- Special Protection Areas (SPA) give protection under the Birds Directive to rare and vulnerable birds, and for regularly occurring migratory species.
- Ramsar Sites are wetlands of international importance designated under the Ramsar Convention.
- National Nature Reserves (NNR) both protect some of the finest sites in England for wildlife and geology, and provide great opportunities for people to experience nature.
- Local Nature Reserves (LNR) are places which have wildlife or geology of special local interest. They are living green spaces in towns, cities, villages and countryside which are important to people, and support a rich and vibrant variety of wildlife.
- Marine Protected Areas (MPA) are areas of sea designated for the protection of biodiversity or natural and cultural resources. These include one Marine Nature Reserve at Lundy.
- National Parks are some of the finest landscapes in England, designated to both conserve and enhance their natural beauty, wildlife and cultural heritage and to provide opportunities for the public to understand and enjoy these special qualities.

Non-statutory designations

- Heritage Coasts are managed so that their natural beauty is conserved and, where appropriate, accessibility for visitors improved.
- European Geoparks contain areas of geological importance and are used to promote the wider understanding of geology to the public.
- World Heritage Sites are places of international importance for the conservation of our cultural and national heritage.
- Biosphere Reserves contribute to the conservation of landscapes, ecosystems and species; foster economic and human development; and provide support for research, monitoring, education and information exchange.
- Local Geological Sites are important for their scientific, educational, and historical value, as well as their visual qualities.

5.3 What is the baseline situation?

Fenland comprises only one Natural Area (The Fens). - identified by a unique combination of physical attributes such as geology, plant and animal species, land-use and culture and based on those put forward by the Countryside Agency/English Nature in 1996 in "The Character of England: landscape, wildlife and natural features." These attributes combine to give an area's distinctive biodiversity. The

Natural Area concept acknowledges that biodiversity does not recognise administrative boundaries or attempts to classify those that are rare or common. It therefore allows the rare and unusual to be conserved alongside the widespread and typical, thus contributing to the overall concept of biodiversity conservation and enhancement.

Designated sites

Part of the Ouse Washes, along the southern boundary of the District is of international importance as a Special Area of Conservation (SAC). Both the Ouse Washes and the Nene Washes are Sites of Special Scientific Interest (SSSI), RAMSAR sites and Special Protection Areas (SPAs). See the preceding section for a description of these various site designations.

SPAs are designated under the European Directive on the Conservation of Wild Birds and together with Special Areas of Conservation (SACs) form a network of protected sites across the EU, called Natura 2000.

Natura2000 sites

The tables below show the Natura 2000 (N2K) sites within or adjacent to Fenland with the potential to be affected by the Fenland Core Strategy. In line with the precautionary principle, N2K sites lying wholly or partially within Fenland's administrative boundary and a 15km buffer area around it are included to reflect the fact that the Core Strategy may affect sites outside the plan area. This is because consideration must be given to the potential for environmental effects, including impacts on designated sites, beyond the administrative boundary of Fenland.

N2K sites within (or at least partially within) Fenland District

Site Name	SAC	SPA	RAMSAR
Nene Washes	✓	✓	✓
Ouse Washes	✓	✓	✓

N2K sites outside Fenland District, but within 15 km

Site Name	SAC	SPA	RAMSAR
Orton Pitt (Peterborough)	✓		
The Wash & North Norfolk Coast (Various Districts)	✓		
The Wash (Various Districts)		✓	✓
Woodwalton Fen (Huntingdonshire) (and forms part of a set of sites collectively known as the Fenland SAC)	✓		✓

Work is currently underway in a Stage 1 (Screening) of the Habitats Regulations Assessment (HRA) for the Fenland Core Strategy Development Plan Document (DPD). The HRA Screening Report sets out the findings of the Screening stage to determine whether the Core Strategy, either alone or in combination with other plans or projects, is likely to have a significant adverse effect on a Natura 2000 site, and thus whether full Appropriate Assessment (Stage 2 of HRA) is required.

There are three Local Nature Reserves (Lattersey Field, Rings End Pocket Park and Nature Reserve and the Nene Washes RSPB reserve) and 31 County Wildlife Sites in the District. This is fewer than in neighbouring Districts, and due largely to the intensive nature of agricultural cultivation. There is a need to protect and enhance local, national, and international nature designations.

There are areas of wildlife habitat in addition to the Nene and Ouse Washes where sand and gravel workings have been completed, leaving water areas fringed with reeds, and where field boundaries have drainage ditches – leading to reed-fringed wildlife corridors.

GIS Analysis of Access to Natural Greenspace Standard

Natural England has undertaken a GIS analysis of ANGSt provision for households in Cambridgeshire. Although the report will not be published until March 2011, results already suggest that only 20% of households in the county have access to a 2ha greenspace within 300m.

Farmland

The farmed environment is the dominant land use in Cambridgeshire⁴ and as a result the futures of many species of plant and animal are inextricably linked to the way that farmland is managed. Figure 2 in Chapter 4 on Land and Water Resources shows the large proportion of high quality agricultural land in the district. There are now very few areas left in Cambridgeshire which are farmed in a traditional way. The vast majority of farming is of a more intensive nature producing a wide range of crops and livestock. There is a great deal of data now available which shows that many of our once common species of bird, mammal and plant have undergone considerable declines in recent years as a result of changes in agricultural practices. The vision for farmland must be to find ways of arresting the declines of formerly widespread and common species, such as the skylark and the brown hare, and to create new areas of farmland habitat where feasible.

Biodiversity Action Plan Habitats

Biodiversity Action Plans for Cambridgeshire have been put together by a local steering group, incorporating local authorities, conservation organisations and statutory bodies and were launched in 2000 and last reviewed in 2008/09.

Relevant habitats in Fenland are:

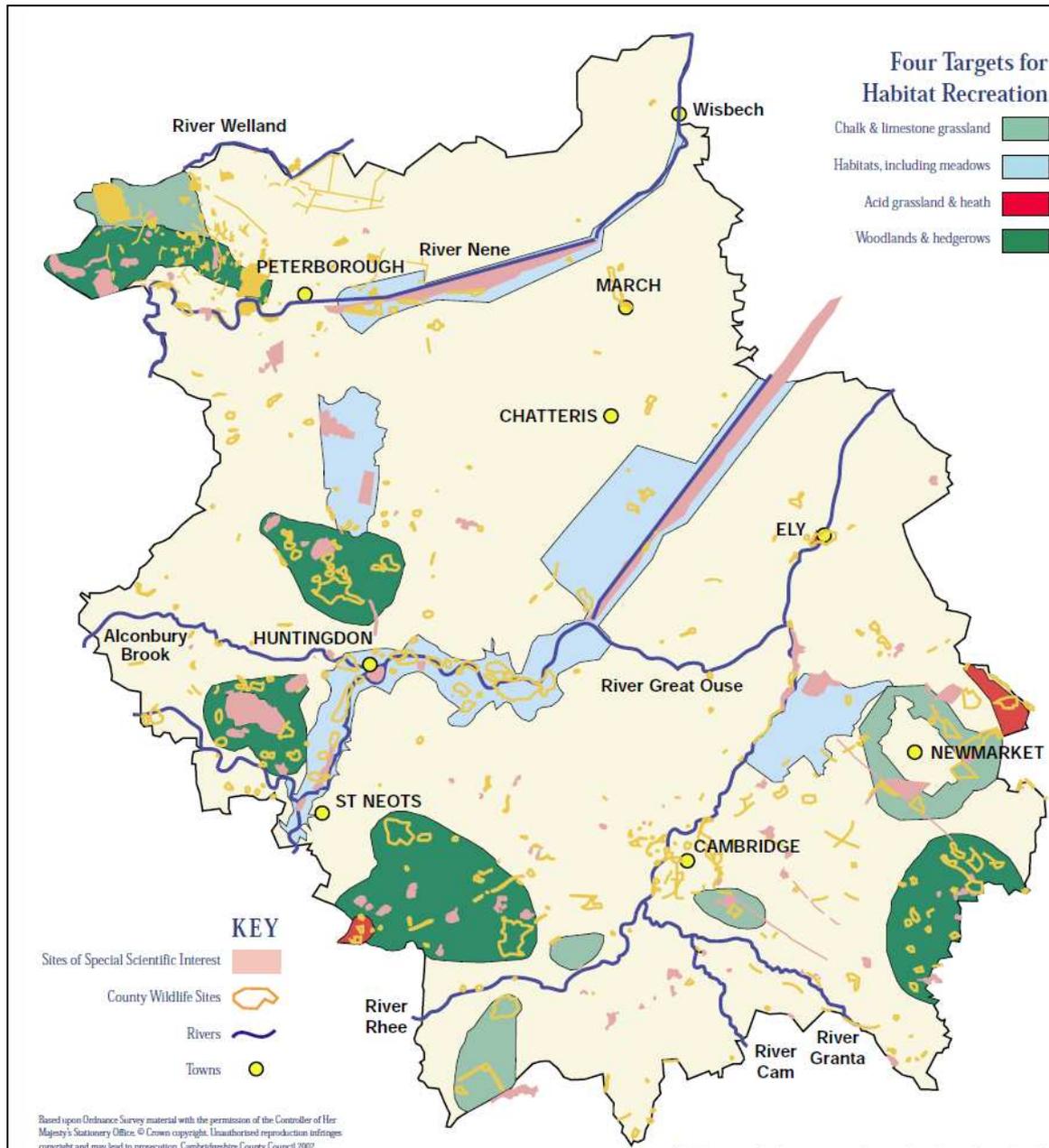
- Parks, Shelterbelts & Open
- Spaces

⁴ **Cambridgeshire Green Infrastructure Strategy** Second Edition Green Infrastructure Strategy: Draft for Public and Stakeholder Consultation January 2010

- Wet Woodland
- Fens
- Traditional Orchards
- Drainage Ditches
- Floodplain Grazing Marsh
- Reedbeds
- Farmland - ponds and lakes, arable land, arable field margins and hedgerows (although hedgerows are limited in Fenland);
- Urban - brownfield and built, domestic gardens, allotments; and,
- Wetland - mineral restoration, rivers and streams.

The Cambridgeshire and Peterborough Biodiversity Partnership has produced a 50-year vision map (figure 3) that suggests a number of priority areas for habitat creation. Fenland contains two areas which are both targeted for the recreation of Wetlands; the first following the River Nene to Wisbech and the second south of Chatteris to the River Ouse.

Figure 3: The Cambridgeshire and Peterborough Biodiversity Partnership 50-year vision



There are hundreds of kilometres of drainage ditches, some of which are wildlife corridors and maybe of special value for invertebrates; and water bodies where sand and gravel workings have been completed.

The Middle Level Commissioners and the North Level Commissioners have a statutory duty to further nature conservation in the performance of their functions and operate a specific conservation strategy, which forms a basis for all their river maintenance operations.

5.4 What are the issues that should be a particular focus of the appraisal?

- There are opportunities for strategic biodiversity gain and adaption to climate change through habitat restoration/creation/enhancement, including those linked to Green Infrastructure delivery
- The protection of designated sites and wider biodiversity
- Climate change - Climate change will exert a range of pressures on biodiversity. Climate change calls for a landscape scale, eco-systems based approach to conservation and positive planning for biodiversity. Left to natural processes, it is becoming clear that many species and habitat types will find it difficult or impossible to successfully adapt to climate change pressures without intervention. In the UK this intervention is likely to be primarily through direct land and habitat management and indirectly through spatial planning activity.
- Planning for strategic biodiversity opportunities - There is a need to think strategically about realising opportunities for biodiversity, including landscape scale projects that reflect an ecosystem/Green Infrastructure approach and will deliver biodiversity gains, protect the district's biodiversity resource in the face of climate change and also deliver valuable ecosystem services
- Brownfield biodiversity - Certain parts of the District may have an important resource, which may be under pressure from development
- Ensuring that housing growth is accommodated with minimum impact on the natural environment and delivers maximum benefits for the natural environment and people together, for example, through green infrastructure provision; managing recreation pressure on designated sites; biodiversity enhancement within the built environment, such as green roofs.

5.5 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to biodiversity:

- Avoid damage to designated sites and protected species
- Maintain and enhance the range and viability of habitats and species

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

An objective on green infrastructure and accessible multifunctional green space is included under the theme of Healthy, Inclusive and Accessible Communities.

Climate change is a cross-cutting theme and is considered in more detail in chapter 7.

5.6 Evidence Gaps

The following points are highlighted in relation to data gaps:

- Achievement of BAP targets.

6. LANDSCAPE AND HERITAGE

6.1 What is the sustainability context?

The Cambridgeshire Design Guide for Streets and Public Realm, Cambridgeshire Horizons (2007)

This guide sets out the key principles and aspirations that should underpin the detailed discussions about the design of streets and public spaces that will be taking place on a site-by-site basis.

European Landscape Convention (European Union, 2000)

In 2006, the UK ratified the European Landscape Convention (ELC) - the first international convention to focus specifically on landscape. The Convention aims to encourage public authorities to adopt policies and measures for protecting, managing and planning landscapes. It covers all landscapes, from the outstanding to the ordinary, that determine the quality of people's living environment. The text provides for a flexible approach to landscapes whose specific features call for various types of action, ranging from strict protection, through management and improvement to actual creation.

PPS1: Delivering Sustainable Development

Government guidance states that policies should be based on a proper assessment of the character of the surrounding built and natural environment, and should take account of the defining characteristics of each local area.

PPS1 emphasises that protection should be given to both the historic and natural environment. It considers protection of the historic environment to come under the umbrella of environmental protection more generally, and states that an important environmental issue is the preservation and enhancement of built and archaeological heritage. PPS1 refers to the character of the historic environment and local distinctiveness – reflecting the fact that heritage conservation is more than a purely designation based issue.

PPS5: Planning for the Historic Environment

PPS5 replaces PPG15 and PPG16, and provides guidance on the management and conservation of buildings, monuments, archaeological sites and landscapes. It maintains the same level of protection to the historic environment as before, but focuses on assessing the significance/value of the heritage asset in question. This encourages active understanding and use of the historic environment as an asset, rather than treating it as a potential barrier to development.

PPS7: Sustainable Development in Rural Areas

Government guidance emphasises that planning authorities should ensure that the quality and character of the wider countryside is protected and, where possible, enhanced. One of the key objectives of PPS7 is the "*continued protection of the open countryside for the benefit of all, with the highest level of protection for our most valued landscapes and environmental resources.*" The guidance recognises that there are areas of landscape outside nationally designated areas that are particularly

highly valued locally. Rather than protect these through formal designations, the Government argues that they should, instead, be protected through criteria-based policies in local development plans which are, in turn, informed by tools such as landscape character assessment (LCA), although local designations are not entirely ruled out where these can be strongly justified.

The Historic Environment: A Force for the Future (DCMS, 2001)

This puts forward the Government's vision for the historic environment. The vision is for a future which recognises the economic and social aspects of the historic environment, such as its economic potential in regeneration schemes; its role in promoting understanding and enjoyment of place; and promoting the engagement of people in decisions which affect their communities. The vision makes clear that the historic environment has an important role in creating sustainable communities.

Regeneration and the Historic Environment (English Heritage, 2005)

English Heritage's position statement *Regeneration and the Historic Environment* also demonstrates the ways that heritage assets can assist regeneration. Historic buildings and areas offer an attractive environment which can help to draw in external investment as well as sustain existing businesses. The historic environment provides a sense of place and identity and is an integral part of quality of life. Active programmes to repair and re-vitalise historic buildings and areas can act as a catalyst to economic confidence and social cohesion. It is therefore important to retain, adapt and re-use buildings considered to be of architectural or historic interest where necessary.

The Heritage Protection White Paper (DCMS, 2007)

The White Paper sets out proposals to simplify current designation processes and consent regimes and places greater emphasis on enhancement of historic assets, and on the undesignated historic environment. It also seeks to provide more opportunities for public involvement and community engagement. Some measures depend on legislative change; others are underway.

Ancient woodland and trees

Government policy, as set out in the 1994 Sustainable Forestry document, is to operate a general presumption against the conversion of woodland and trees to other use and to protect or ancient and semi-natural woodlands. This has been reinforced by the recent publishing of the Government's Policy for England's Ancient and Native woodland, which goes on to say that "*Ancient and native woodland should be exemplars of sustainable development, and provide opportunities for enterprise and employment*". (DEFRA, 2005: Keepers of Time). PPS9: Biodiversity and Geological Conservation, also contains specific references to ancient woodland.

A Strategy for England's Trees, Woods and Forests

Land use policy more generally can act as a fundamental driver of change in the landscape. For example, the *Strategy for England's Trees, Woods and Forests* (which replaces the *England Forestry Strategy*) published by the Forestry Commission (2007) promotes managing and creating woodland so that it delivers wider public benefits. Similarly, the implementation of the *Water Framework Directive*

could result in significant changes to rural land use and landscape quality, particularly in and around aquatic ecosystems and associated wetlands.

Agri-Environment Schemes, Natural England

Agri-environment schemes have a great potential to influence any rural landscape. Both the Environmentally Sensitive Area (ESAs) scheme and the Countryside Stewardship Scheme rewarded farmers for their conservation and enhancement of local landscapes. Several of the region's most unique areas in terms of landscape were designated as ESAs. These schemes have now been replaced by three 'Environmental Stewardship' schemes that seek to continue to delivering wider benefits from agriculture, including through enhancing the natural landscape in accordance with its defined character.

6.2 What is the baseline situation?

Fenland's landscape is unique not only in its physical appearance but in its origins. Draining the Fens was one of the largest engineering projects undertaken anywhere in the world and today's man-made landscape provides some of the richest agricultural soil in the Country, as shown in the Land and Water section.

The Fen landscape is, for the most part, uniformly flat and is criss-crossed by a series of drainage channels, both natural and man made. Agricultural practices have removed many traditional landscape features and large open fields are characteristic of much of the area.

The main towns were built on islands in the fen and all have an attractive historic core while many of the smaller villages are linear in form, stretching out along the network of minor roads.

In Fenland there are:

- 20 scheduled monuments. Scheduled Monuments are designated by central government and afforded statutory protection.
- 10 Conservation Areas
- One Grade II registered park and garden (Peckover House and Garden, North Brink, Wisbech)
- 783 Listed buildings, most falling within Grade II:

East of England, 2009								
District, Unitary Authority	LISTED BUILDINGS							
	Grade I	Grade II*	Grade II	A	B	C	Grade Not Classified	Total Listed buildings
Fenland	9	42	732	0	0	0	0	783

Listed buildings are buildings of special architectural or historic interest and are legally protected. There are three broad levels of protection:

Grade I those of particular great importance to the nation's built heritage

Grade II* particularly important buildings of more than special interest

Grade II those of special interest

A, B, C	Refer to an older listing system which relate mainly to places of worship. Broadly equivalent to Grade I, Grade II* and Grade II
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The market towns of Wisbech, Chatteris, and Whittlesey have distinctive densely developed conservation areas reflecting their organic layouts. Conversely March conservation area mostly covers the more loosely developed riverside areas. Both these areas need to be protected from inappropriate development and enhanced. The sustainable retention and reuse of decaying historic buildings remains an issue especially in Wisbech and Whittlesey.

Conservation area appraisals have been approved for March, Wisbech, Chatteris and Whittlesey. Draft CA appraisals have been produced for Doddington and Leverington but are yet to be approved by Members.

These figures differ slightly from the 'Heritage Counts' data published in 2009. This is to take into account local information provided by Fenland District Council's Senior Conservation officer. The Heritage Counts data is updated annually and the 2010 version has now been published. The numbers of designated heritage assets in Fenland has not altered from 2009.

Townscape Character

The villages of Fenland tend to be relatively large in comparison with other parts of Cambridgeshire, often comprising a 'parent' village situated on a Fen island of slightly higher ground, together with one or two nearby hamlets with houses strung out along a road or drainage bank. Most buildings are of the local yellow or 'Gault' brick and date from the 19th or 20th Century. However there are a few that date from much earlier often leaving their own mark on the surrounding townscape either through organic street patterns or on surrounding buildings.

Heritage at Risk Register, 2010

According to the Heritage at Risk Register, 2010, Fenland currently has one listed building and ten scheduled monuments "at risk".⁵ Fenland's Building Conservation Officer has advised that there are twenty five listed buildings at risk.

Landscape

The District falls within National Landscape Character Area 46 - Fenlands and is characterised by:

- Large-scale, flat, open landscape with extensive vistas to level horizons and huge skies.
- A hierarchy of rivers, drains and ditches provide a strong influence throughout the area. Embanked rivers and roddons create local enclosure and elevation. Banks provide good grazing and grassland habitats.
- Modestly elevated 'islands' within fens provide isolated higher ground for most settlement. A higher proportion of grassland, tree cover and hedgerows are associated with these areas.

⁵ East of England report: <http://www.english-heritage.org.uk/publications/HAR-2010-regional-registers/>

- Settled Fens or 'Townlands', in arc set back from the Wash, exhibit an ancient medieval and irregular field pattern. Typically smaller-scale with scattered farmsteads and dispersed ribbon settlements along the main arterial routes.
- Peaty Fens drained in 17th century comprise large rectilinear fields of black soil. A geometric road and drainage pattern with major high-level drains, washes and associated pumping stations. Roads and rail links often on elevated banks.
- Area south of Lincolnshire Wolds most recently drained with Wolds providing marked 'Upland' horizon to north.
- Woodland cover is sparse. Occasional avenues to roads, elsewhere isolated field trees have marked significance. Shelter belts including poplar, willow and leylandii hedges around farmsteads. Numerous orchards in Wisbech area.
- Fragments of relic wet fen areas at Wicken, Woodwalton and Holme.
- Built forms exhibit strong influence ranging from historic cathedrals and churches, like Ely and Boston to large agricultural and industrial structures. Domestic architecture displays combination of elegant Georgian brick houses and bland 20th century bungalows.
- Marshes directly adjacent to the Wash exhibit an exceptionally open aspect, broken only by a series of sea walls. Associated river outfall structures, tidal saltmarshes and mudflats.
- Rich and varied intensive agricultural land use including wide range of arable, root crops, bulbs, vegetables and livestock. Field labourers prevalent at harvesting. Horticultural glasshouses and general agricultural clutter a significant feature.
- Bronze Age, Iron Age and Roman landscapes emerging from below the falling peat. Very rich archaeology especially on fen margins.

Landscape Character of the District

Landscape Character assessment was undertaken as part of the Fenland District Council – Wind Turbine Development Policy Guidance work. Landscape character types and areas are identified as follows:

Landscape Character Type	Landscape Character Area
Drained Fenland	The Fens
Settled Fen	Wisbech Settled Fen
Clay Fen Island	Chatteris Clay Island
Clay Fen Island	March Clay Island
Extracted Clay Fen Island	Whittlesey Island

The table 1 below provides a summary of the key characteristics for each of the landscape character areas.

Table 1 – Landscape character types and areas

Landscape Character Area	Location	Key Characteristics	Distinctive Features
Chatteris Clay Island	This area is located to the south of Fenland District. The market town of Chatteris is located in the western portion of the island, which extends out into the Fens for up to 4km east of Chatteris. The A142 and A141 both run through the island.	<ul style="list-style-type: none"> • Slightly elevated clay island set within the surrounding peaty Fens, rising to a maximum height of 11m AOD • Highly visible settlement edge with several dominant storage and agricultural packing plants • Historic core of buildings along the main roads through Chatteris, using locally traditional buff brick • Most other housing typically 20th century with minimal vernacular style • Poplar and other tree belts create strong linear features around some fields and isolated properties • Field units smaller than in surrounding Fens and more organic in shape, with remnant hedgerows • Road levels less pronounced than in surrounding Fens 	<ul style="list-style-type: none"> • A142 Chatteris Bypass • Vegetable crops
March Clay Island	This area is located towards the centre of Fenland District. The villages of Wimblington and Doddington are located within the area with part of the market town of March located in the northern portion of the island. The A141 runs through the middle of the island.	<ul style="list-style-type: none"> • Slightly elevated clay island set within the surrounding peaty Fens, rising to a maximum height of 6m AOD • Built edge of settlements include some unsympathetic industrial structures • Very little woodland but some large individual oak trees • Vegetation and built form creates good visual enclosure in places, particularly in the villages • Paddocks and smaller fields related to settlements • Hedgerows and poplar belts present, particularly along the sides of roads • Older roads are much more winding than the straight roads of the Fens • Open panoramic views across Fens 	<ul style="list-style-type: none"> • Large pylons visible close to the island • A141 bypassing March, Wimblington and Doddington • Clay soil is lighter in colour than surrounding peaty Fens • Views to wind farm at Ranson Moor
Wisbech Settled Fen	This area is located in the north east of Fenland District. The market town of Wisbech and villages of Tydd St Giles, Newton, Leverington, Wisbech St Mary, Friday Bridge and Elm are	<ul style="list-style-type: none"> • A relatively flat landscape that is heavily settled compared to the surrounding peaty Fens • Settlement pattern includes a number of nucleated villages with 20th century ribbon development along the local roads 	<ul style="list-style-type: none"> • Pylons, particularly north of Wisbech • A47 • Navigable River Nene with associated ships, port and lifting

Landscape Character Area	Location	Key Characteristics	Distinctive Features
	<p>located within the area. The A47 and A1101 both run through the area.</p>	<ul style="list-style-type: none"> • Market towns and villages have an historic core with traditional buildings, village green and church • A mix of straighter main roads and more organic winding secondary roads • Linear waterways, river and ditches • Fruit orchards and other plant nurseries form a sub area west of Wisbech • Orchards enclosed by shelter belts of pollarded poplars and alders to create a small to medium scale landscape • Traditional buildings are red brick as opposed to the buff brick used in surrounding areas 	<p>equipment</p> <ul style="list-style-type: none"> • Large drains such as North Level Main Drain • Wisbech with its elegant Georgian merchant houses fronting onto the river • Large number of bungalows • Glasshouses associated with orchards and nurseries
	<p>This area is located to the north west of Fenland District. The market town of Whittlesey and the villages of Coates and Eastrea are located within the area, which abuts the boundary with Peterborough City Council to the west. The River Nene is located to the north of the area, the A605 runs through the middle of the island, as does the Peterborough to Cambridge railway line.</p>	<ul style="list-style-type: none"> • Slightly elevated clay island within the surrounding Fens, rising to a maximum height of 8m AOD • Island appears relatively wooded in distant views, particularly to the east of the area • Highly visible settlement edge, particularly to the north and east of Whittlesey • Degraded landscape in association with Hanson brickworks west of Whittlesey • Brick pits at different stages of extraction – active, restored and unrestored • Large industrial buildings and associated infrastructure to the east of Whittlesey • Whittlesey contains considerable areas of mid to late 20th century housing • Historic core to centre of market town including some grand historic buildings, particularly along the main road and the market square • Older buildings buff brick and thatched roofs 	<ul style="list-style-type: none"> • Brickworks west of Whittlesey, particularly the chimneys • 3 large wind turbines near McCain's factory • King's Dyke • King's Dyke Nature Reserve • Duck decoy • Whittlesey church
<p>The Fens</p>	<p>This area forms the majority of Fenland District. A large proportion the market town of March is located towards the</p>	<ul style="list-style-type: none"> • Large scale, flat and open landscape with extensive views and large skies • Largely unsettled, arable landscape with isolated villages and scattered individual 	<ul style="list-style-type: none"> • Wind turbines at Coldham, Glass Moor, Ransom Moor and on the northern edge of

Landscape Character Area	Location	Key Characteristics	Distinctive Features
	centre of the area. The villages of Benwick, Christchurch, Guyhirn, Manea, Murrow, Parson Drove, Thorney Toll and Turves are also located within the area. The River Nene forms the northern boundary of Fenland District and the River Ouse forms the southern boundary. The A47, A605 and A141 run through the middle of the area, as does the Peterborough to Cambridge railway line and its offshoot to Wisbech.	properties <ul style="list-style-type: none"> • Individual properties often surrounded by wind breaks including numerous conifers • Rectilinear field structure divided by the pattern of artificial drainage ditches • Very few hedgerows in landscape • Productive and functional landscape with few recreational uses • Long straight roads, elevated above surrounding fields but locally uneven 	March <ul style="list-style-type: none"> • Coldham Estate which has a more structured pattern of trees, hedges and woodland • North Level Main Drain • March with its historic core • Old Course of the River Nene • Pylons and overhead wires

Each of these character areas fits within Natural England's Countryside Character 46: The Fens at the national scale; and within Area 8: Fenlands in the Cambridgeshire Landscape Guidelines. Whilst they share many similarities, they have a number of distinct differences in character and condition at a local level to distinguish them as separate landscape character areas at the District scale.

Archaeology

There is a considerable archaeological heritage in the District, where early human activity at the Fen Edges has been well preserved due to the build up of peat and high water levels. Rising water levels resulted in a shift in settlement patterns to the fen islands which became the foci of historic settlements. The first attempts at drainage occurred in the Roman period, but was not until the 17th century that drainage began in earnest, bringing more land into cultivation and eventually resulting the fen landscape familiar today. Continuing peat shrinkage is exposing further archaeological sites but this, combined with intensive agriculture and development threatens their survival.

The Historic Environment Record, maintained by the County Council Archaeology Service, is the principal source of information for the archaeological resource of Fenland. There are currently over 1600 entries for the District.

6.3 What are the issues that should be a particular focus of the appraisal?

- Uncontrolled or unsympathetic development could harm Fenland's local landscape character if it occurs on a large enough scale, or repeatedly through a particular area.
- Fenland's archaeological heritage could be threatened by development that in effect sterilises known sites, or which harms the setting of sites
- Development may encroach on existing areas of Fenland's open space, amenity and recreation value, or it may harm their setting and tranquillity

- Opportunities to retain and re-use historic buildings where appropriate
- The need to preserve and where appropriate, enhance buildings, monuments, sites, areas and landscapes that are designated or locally valued for their heritage interest and/or archaeology; and protect/enhance their settings.

6.4 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to Landscape, Townscape and Archaeology:

- Preserve and where appropriate, enhance buildings, monuments, sites, areas and landscapes that are designated or locally valued for their heritage interest and/or archaeology; and protect/enhance their settings.
- Create places, spaces and buildings that are well designed, contribute to a high quality public realm and maintain and enhance diversity and distinctiveness of townscape character.
- Retain the distinctive character of Fenland's landscape.

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

6.5 Evidence Gaps

Historic Landscape Characterisation data and Historic Environment Character Areas and Zones data was not finalised and is therefore not available in the public domain. A Landscape characterisation study is currently being undertaken by Cambridgeshire County Council and it is due to be completed in December 2010.

7. CLIMATE CHANGE AND FLOOD RISK

The Local Development Framework must put in place measures to mitigate and adapt to Climate change and this is a key cross-cutting theme of spatial planning.

Mitigation aims to promote measures to reduce greenhouse gas emissions through:

- promoting energy efficient, low carbon building design'; and promoting energy efficient systems to run the building;
- encouraging development and use of renewable and low carbon sources of energy (particularly community and micro-scale energy generation);
- reducing the need to travel and ensuring good accessibility by sustainable modes of transport;
- promoting land uses that act as carbon sinks
- reducing the amount of biodegradable waste sent to landfill (largely outside the scope of the LDF).

Adaptation aims to promote measures to improve the resilience of the district to the unavoidable adverse effects of climate change. Climate change adaptation means tackling the following issues (amongst others):

- Flooding – from fluvial and surface water "flash" flooding
- Water scarcity - impacting on growth, industry, agriculture and ecosystems
- Pressures on biodiversity
- Changing temperatures

Flooding is a key adaptation consideration. Government guidance on flood risk emphasises that, although flooding cannot be wholly prevented, its impacts can be avoided and reduced through good planning and management.

7.1 What is the policy context?

The Kyoto Protocol

The Kyoto Protocol (1997) sets legally binding measures to achieve the objectives of the United Nations Framework Convention on Climate Change (UNFCCC). Under the Kyoto Protocol the UK is committed to reducing greenhouse gas emissions by 12.5% below base year (1990) levels over the period 2008-12. The UK has committed itself to exceeding Kyoto targets, most recently through the Climate Change Act 2008, which commits to an 80% reduction in GHGs by 2050 against a 1990 baseline.

Climate Change Act 2008

The Act sets out a long term binding framework to tackle climate change including: setting ambitious, legally binding targets; taking powers to help meet those targets; strengthening the institutional framework; enhancing the UK's ability to adapt to the impact of climate change; and establishing clear and regular accountability to UK Parliament.

A key aim of the Act is to improve carbon management helping the transition towards a low-carbon economy through the setting of carbon emission targets

Climate Change and Sustainable Energy Act 2006

The Climate Change Programme, published in 2006, set out policies and priorities for action in the UK and internationally. Subsequently, the Climate Change and Sustainable Energy Act 2006 placed an obligation to report to Parliament on greenhouse gas emissions in the UK and action taken to reduce these emissions. The Act also specifically promotes such things as microgeneration, energy efficiency, Building Regulations, dynamic demand technologies, community heat and energy schemes, amendments to the Renewables Obligation and the adjustment of transmission charges for electricity.

Energy Act 2008

The Act implements the legislative aspects of the 2007 Energy White Paper. The part of the act that has the greatest relevance to spatial planning is the 'Renewable Heat Incentive', which will establish a financial support mechanism for renewable heat, from large industrial sites down to the household level. The supporting text to the act points out that several renewable heat technologies already exist and are being deployed at varying rates and scales. Key technologies include:

- Biomass: Used in boilers or stoves or at larger scales, including Combined Heat and Power (CHP)
- Heat from waste: Used to generate heat through combustion in boilers / CHP plants or via advanced processes which produce combustible biogas
- Microgeneration heat technologies: solar thermal and air or ground source heat pumps.

The UK Renewable Energy Strategy

In spring 2008 the UK agreed with other Member States to an EU-wide target of 20% renewable energy by 2020 – including a binding 10% target for the transport sector.

The European Commission has proposed that the UK share of this target would be to achieve 15% of the UK's energy from renewables by 2020 which is equivalent to almost a ten-fold increase in renewable energy consumption from current levels. In response to these targets the Department of Energy and Climate Change has published the UK Renewable Energy Strategy. This strategy sets out how we all have a role to play in promoting renewable energy, from individuals to communities to businesses by:

- additional financial incentives for electricity generation from renewables;
- additional financial incentives for heat generation from renewables to encourage rapid growth in relatively low cost renewable technologies in homes and industry;
- increasing the role of biofuels (allowing for sustainability concerns) and electric cars;
- removing grid barriers to renewables;
- reducing planning consent barriers through a National Policy Statement and setting regional renewable targets that shape local economic strategies;
- using more energy from waste; and
- stimulating innovation and the supply chain.

The UK Low Carbon Transition Plan (2009)

The UK Low Carbon Transition Plan plots how the UK will meet the 34 percent cut in emissions on 1990 levels by 2020 – UK emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were 22.0 per cent lower in 2008 than in the base year, down from 779.9 to 608.4 million tonnes carbon dioxide equivalent. The Plan shows how reductions in the power sector and heavy industry; transport; homes and communities; workplaces and jobs; and farming, land and waste sectors could enable carbon budgets to 2022 to be met.

Renewable Heat Incentive (RHI)

The Renewable Heat Incentive (RHI) will provide financial support for those who install renewable heating, which qualifies for support under the scheme. On 1 February 2010, the previous Government published a consultation on the introduction of a Renewable Heat Incentive (RHI) scheme, which it aimed to introduce in April 2011. On 20 October 2010, as part of the Spending Review, the Chancellor announced that the Renewable Heat Incentive (RHI) will be launched in 2011.

The Department of Energy and Climate Change (DECC) remain committed to the ambition of moving from 1% to 12% of all heat generated from a renewable source by 2020 and the introduction of the RHI represents over £850m of investment over the Spending Review period.

Following the February consultation and in light of the Spending Review announcement, DECC will now consider further the operation of the scheme including RHI tariffs and technologies supported. DECC expect to be in a position to announce the details of the scheme shortly and launch the scheme in 2011.

Feed-in Tariffs (FITs)

DECC has used powers in the Energy Act 2008 to introduce a system of feed-in tariffs to incentivise small scale (less than 5MW), low carbon electricity generation.

The feed-in tariffs work alongside the Renewables Obligation (RO), which will remain the primary mechanism to incentivise deployment of large-scale renewable electricity generation, and the Renewable Heat Incentive (RHI) which will incentivise generation of heat from renewable sources at all scales.

The FITs scheme went live on 1 April 2010. Through the use of FITs DECC hope to encourage deployment of additional low carbon electricity generation, particularly by organisations, businesses, communities and individuals who are not traditionally engaged in the electricity market. This “clean energy cashback” will allow many people to invest in small scale low carbon electricity, in return for a guaranteed payment both for the electricity they generate and export.

PPS22: Renewable Energy

PPS22 on Renewable Energy³⁵ includes a requirement for local authorities to allocate specific sites for renewable energy and to encourage developers to provide on-site renewable energy generation as appropriate.

A point worth noting is the matter of the visual impacts of wind farms. PPS 22 states that planning authorities should take into account the cumulative impact of wind generation projects in particular areas. Fenland District Council commissioned a wind turbine study by the Landscape Partnership. The guidance is used in the determination of applications for wind generation projects.

The Code for Sustainable Homes

The Code for Sustainable Homes measures the sustainability of a new home against nine categories of sustainable design and uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. Minimum standards for energy and water use are set at each level. Since 1 May 2008, a rating against the Code has been mandatory for new homes. The aim of the Code is to improve the overall sustainability of new homes by setting a single national standard within which the house building industry can design and construct homes to higher environmental standards. Another key aim of the Code is *“to encourage housing development in low flood risk areas, or to take measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.”*

Housing Green Paper

The 2007 Housing Green Paper (CLG) identified that we need to provide greener, better designed housing for the future. The Green Paper goes on to set out (not for the first time) the Government’s wish that all new homes be zero carbon (Code Level 6) from 2016. Interim targets are for all new homes to emit 25% less carbon from 2010 and 44% less from 2013.

PPS1: Delivering Sustainable Development

“Development plans should contribute to global sustainability by addressing the causes and potential impacts of climate change – through policies which reduce energy use, reduce emissions...promote the development of renewable energy resources, and take climate change impacts into account in the location and design of development.”

Within a design context a key objective for planning authorities is to ensure that developments *“are sustainable, durable and adaptable (including taking account of natural hazards such as flooding) and make efficient and prudent use of resources.”*

This emphasises that in providing for development, planning authorities should *“secure the highest viable resource and energy efficiency and reduction in emissions”* and *“deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car”*. Another principle that is promoted is that *“new development should be planned to make good use of opportunities for decentralised and renewable or low carbon energy”*.

PPS1 supplement on Planning and Climate Change requires local authorities to mitigate and adapt to climate change through appropriate location and patterns of development, promoting the reduction in car use, conserving and enhancing biodiversity and ensuring that new development is resilient to the effects of climate change.

DEFRA Climate Change Adaptation Programme

One of the requirements of the Climate Change Act is to produce a statutory National Adaptation Programme, based on the results of the National Climate Change Risk Assessment. The results of the risk assessment are expected to be available in 2011, and DEFRA's aim is to start the National Adaptation Programme formally in 2012. The National Adaptation Programme will report to Parliament on a regular basis.

PPS25: Development and Flood Risk

Planning Policy Statement 25 (PPS25) requires that local planning authorities achieve the following when preparing the local development framework:

- Set out policies that seek to avoid flood risk wherever possible and manage it elsewhere;
- Seek opportunities to relocate particularly vulnerable developments to locations at less risk of flooding, taking into account the impacts of climate change;
- Safeguard land from development that is required for current and future flood management.
- Allocate all proposed development sites in accordance with the 'Sequential Test', reduce the flood risk and ensure that the vulnerability classification of the proposed development is appropriate to the Flood Zone classification;
- Require site-specific Flood Risk Assessments to be submitted for all developments within Flood Zones 2 and 3 or over 1 hectare in size in Flood Zone 1 and for sites with identified flood sources, to assess the risk of flooding to the development and identify options to mitigate the flood risk to the development, site users and surrounding area;
- Flood Risk to development should be assessed for all forms of flooding;
- Where floodplain storage is removed, the development should provide compensatory storage on a level for level and volume for volume basis to ensure that there is no loss in flood storage capacity.

PPS25 aims to ensure that flood risk is taken into account at all stages in the planning process from the inception of regional and local policy through to individual development control decisions. The document seeks to avoid inappropriate development in areas at risk of flooding and to direct development away from areas of high risk through the application of the sequential approach and the precautionary principle. It is acknowledged that, in some exceptional circumstances, it might not be possible to deliver available sites in lower risk zones through the sequential approach. Here policy will aim to ensure that the development will be safe, without increasing flood risk elsewhere and, where possible, reducing flood risk overall.

Following on from PPS25, it is interesting to note the findings of the Pitt Review, which is that flood risk is here to stay. Following the Pitt Review (2007) the Government has published a Flood and Water Management Act.

Flood and Water Management Act (2010)

The Flood and Water Management Act 2010 is the outcome of a thorough review of the responsibilities of regulators, local authorities, water companies and other stakeholders in the management of flood risk and the water industry in the UK. The Pitt Review of the 2007 floods was a major driver in the forming of the legislation. One major implication of the Act is a new requirement to encourage the uptake of sustainable drainage systems by removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SUDS for new developments and redevelopments. on developers to put SuDS in place wherever practicable and meet national standards relating to drainage. SuDS will be adopted and maintained by local authorities. This will result in less water reaching sewerage treatment works, reduced maintenance work for sewerage companies, and consequently reduced risk of flooding from overflows.

Making Space for Water

This is the cross Government programme taking forward the strategy for flood and coastal erosion risk management in England. Reflecting national priorities, individual programmes include the following:

- Holistic approach to managing flood and coastal erosion risk
- Urban flood risk and integrated drainage
- Groundwater flooding
- Land management
- Achieving sustainable development
- Developing a broader portfolio of options to deliver flooding and coastal solutions
- Building stakeholder and community engagement
- Flood and coastal erosion risk management innovation
- Land use planning
- Increasing resilience to flooding
- Encouraging and incentivising increased resilience to flooding
- Resilience standards for new buildings
- Emergency planning response and resilience

Another important component of the programme is progress of Shoreline Management Plans (SMPs), Catchment Flood Management Plans (CFMPs) and the overarching themes of Integrated Coastal Zone Management (ICZM) and Sustainable Flood Management (SFM).

Integrated Sustainable Flood Management

Just as it is recognised that agri-environmental schemes can contribute to wider climate change adaptation objectives including safeguarding water quality and flooding, rural and urban land use policies should also avoid offering conflicting incentives for activities such as draining of wetlands or river straightening, which can serve to increase surface water run-off. An integrated approach implies that there is a need for a package of measures over entire catchments, rather than just isolated and local schemes.

Great Ouse Catchment Flood Management Plan

The main aim of CFMPs is to understand the factors that contribute to flood risk within a catchment both now and in the future so that recommendations can be made for managing flood risk over the next 50 to 100 years.

As part of the CFMP process each CFMP area was divided up into broad areas (known as “policy units”), which represent areas of similar characteristics, similar flood mechanisms and similar flood risks. Each policy unit was then assessed to decide which policy will provide the most appropriate level and direction of flood risk management both now and in the future. One of six standard flood risk management policies has been applied to each policy unit. Fenland is within policy unit 4:

- Policy 4 – Take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change).

Cambridgeshire Climate Change and Environment Strategy (2008)

The purpose of the Strategy is:

- To provide a clear statement of the climate change and environmental objectives for Cambridgeshire;
- To set out how the Council will meet environmental sustainability and climate change aspects of its Corporate Priorities;
- To provide a framework for an ongoing programme of action by the Council on environment and climate change issues;
- To guide the Council in working with partner organisations and other stakeholders on environmental issues locally, regionally and nationally; and
- To raise awareness of key environmental issues affecting Cambridgeshire

To meet this purpose the Strategy includes a climate change and environment vision for 2021, which establishes a long-term aspiration for what the Council hopes to achieve in terms of the environmental sustainability of Cambridgeshire:

‘Climate change is a central theme to all of the Council’s work and consequently significant reductions in emissions have been and continue to be made. In this way the Council makes a leading contribution towards national CO2 reduction targets and is progressing well against its own aspirational target. The Council is well prepared for the impacts of climate change across all of its services. Cambridgeshire has responded to the growth agenda by working with partners to ensure that new developments are designed with a low carbon economy in mind. Major developments have been completed using sustainable methods of construction and include a comprehensive range of measures for more sustainable transport and green infrastructure. Both new and existing communities in Cambridgeshire demonstrate sustainability with integration of social, economic and environmental goals. Everyone has opportunities to contribute to local decision-making and to develop a sense of community identity. Generally the natural and built environment is managed effectively to conserve and enhance the character and biodiversity of the County. Work is ongoing to improve access to ‘greenspace’. The people of Cambridgeshire can enjoy an environment that is safe from contamination, and improvements in air and water quality have been made and maintained. The Council is a resource efficient authority in terms of water, waste and energy, setting a positive example to others. There have been further reductions in the amount of municipal waste and

disposal has been reduced to an absolute minimum as part of efforts to eliminate the land filling of untreated municipal and commercial waste. Across the Council employees take responsibility for their own environmental impacts. The Council works alongside local partners, to support the wider community to make low carbon, environmentally responsible choices'.

7.2 What is the Baseline Situation?

Climate is changing and this change will continue over this century and beyond. Reports including 'Living with Climate Change in the East of England' and 'Tackling Climate Change in Cambridgeshire' recognise that the effects and impacts of this change will have major environmental, economic, social and health consequences in the future. The likely impact of climate change in the Fen area, which includes Fenland, will be fluvial flooding, saline intrusion and impacts on agriculture including soil moisture availability, increased temperatures and longer growing seasons.

A combination of hot, drier summers, wet, warmer winters and increased extreme climatic events will lead to increased subsidence on fen roads and other major infrastructure. In order to anticipate these changing conditions new building design and location and existing building modification should look to incorporate 'resistant' features such as ventilation, flood resilience and water efficiency. Waste, air quality and nature management will also be affected.

Other potential impacts of climate change are increased rate of flooding due to:

- (i) Tidal events due to higher sea levels.
- (ii) More intense pluvial events.
- (iii) Increased surface water run-off rates due to changes in crops grown.
- (iv) Failing infrastructure.

Flood Risk

Cambridgeshire Horizons have commissioned Scott Wilson to undertake a Level 1 Strategic Flood Risk Assessment for Fenland. The document is currently in draft form. Early indications show that flood risk is very high across the district. Most of the district falls within the Environment agency Flood Zones 2 and 3. There are areas of flood zone 1, mostly in the market towns that are situated on Fen islands of slightly higher ground.

Amount of renewable energy in Fenland

Renewable energy can be defined as energy generated from natural resources, such as sunlight, wind, rain, tides and geothermal heat, which are renewable (naturally replenished). The data table below splits it into types – wind, biomass (from plant or animal matter), landfill gas, sewage gas, photovoltaic (from the sun) and hydropower.

Core Indicator E3 looks at the energy generation capacity provided from renewable energy sources and seeks to monitor the progress of any such schemes through the planning process. Indicator E3 is only concerned with those schemes that require planning permission and therefore does not include schemes that would be permitted under the Town and Country Planning (General Permitted Development) Order 1995 or by subsequent amendments. Table 2 shows the total additional capacity provided

by renewable energy schemes each year in Fenland. The majority of schemes are wind related.

Table 2: Total installed renewable energy capacity by type (Megawatts)

Fenland	Pre 1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-10	Total
Wind	0	0	0	0	0	0	2	32	6.006	31	3.018	14.00	88.024
Biomass	0	0	0	0	0	0	0	0	0	0	1		1
Landfill gas	0	0	0	1.003	0	0	0	0	0	0	0		1.003
Sewage gas	0	0	0	0	0	0	0	0	0	0	0		0
Photovoltaic	0	0	0	0	0	0	0	0	0	0	0		0
Hydro-power	0	0	0	0	0	0	0	0	0	0	0		0
Total	0	0	0	1.003	0	0	2	32	6.006	31	4.018	14.00	90.027

Source: Renewable energy statistics from the Cambridgeshire Research and Monitoring team following the annual development survey at 31 March 2009.

As of 31 March 2009 a total of 7 small wind turbines had been installed. These smaller wind turbines account for 0.04% of the total renewable energy capacity across the district.

Almost half of renewable energy capacity installed in Cambridgeshire since 1999 is located in the district of Fenland – particularly due to the large number of wind turbines installed.

CO2 Emissions

See the Pollution chapter for data on CO2 emissions in Fenland.

7.3 What will be the situation without the LDF?

Although national building regulations are tightening (with the aim currently to require all new housing to be ‘zero carbon’ by 2016), in the shorter term there is a requirement for planning policy to drive forward step change in terms of energy efficiency and the incorporation of renewable energy within the built environment. Without strong planning policy, it is unlikely the necessary changes will occur fast enough, and it is likely that CO2 emissions for the Fenland will continue to rise.

Climate change is anticipated to have a major effect on the extent and frequency of future flooding. The Regional Flood Risk Assessment states that: *“Demand for more housing is likely to put increased pressure on surface water and sewer drainage systems. The flooding situation will get worse as sewers reach the limits of their capacity and flood more frequently.”* There is a need to take cross-cutting action

through spatial planning to address flood risk. Without this there will be missed adaptation opportunities and the effects of climate change may be more severe.

7.4 What are the issues that should be a particular focus of the appraisal?

- There is a high risk of flooding across the district. There is a need to consider the impact of development on the risk of flooding from all sources and consider how a pro-active approach can be taken to reducing flood risk by taking into account the findings of the Fenland Level 1 SFRA when preparing policies and allocating sites for development.
- There is a need to mitigate against and adapt to the effects of climate change;
- It will be important to explore alternative ways to increase the amount of energy generated by decentralised or renewable sources, taking account of local opportunities.

7.5 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to climate change and flood risk:

- Increase use of renewable energy sources whilst minimising waste and the use of other energy resources
- Limit or reduce vulnerability to the effects of climate change
- Minimise vulnerability of people, places and property to the risk of flooding from all sources

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

8. POLLUTION

The indirect health impacts of poor air quality are significant in the UK. It was estimated that up to 24,000 people per year may have their deaths 'brought forward' by air pollution in 1996; and a health impact assessment of the Government's Air Quality Strategy suggests that the strategy will save thousands of life-years annually⁶.

At the Sustainability Appraisal workshop held on the 15th July 2010, it was debated whether the themes of Climate Change and Pollution should be considered together or separately. It was decided that they should be considered separately to avoid confusion. As a result of this, it was decided that carbon dioxide emissions should be included in this chapter on pollution, rather than the previous chapter on climate change. However, the entire policy context included in chapter 7, with the exception of the specific adaptation and flooding policies is relevant to carbon dioxide emissions.

On a local scale, concentrations of atmospheric pollutants and their deposition can have direct and indirect effects. For vegetation, direct effects include visible damage to plants and indirect effects include changes in the productivity and health of plants. The deposition of atmospheric pollutants to the vegetation and surrounding ground can affect soil characteristics including acidity and the availability of nutrients. It can also have particular effects on nature conservation sites⁷.

8.1 What is the Sustainability Context?

The Fenland Sustainable Community Strategy 2009 - 2012

A priority theme of the SCS is 'a cleaner and greener district, which everybody can enjoy'. A sub-priority of this theme is to encourage better use of resources in the community to reduce CO2 emissions.

PPG13: Transport

PPG13 states that quality of life depends upon transport and easy access to jobs, shopping, leisure facilities and services. The objectives of *PPG13* include the integration of planning and transport at the national, regional, strategic and local level in order to promote more sustainable transport choices (both private travel and for freight movement); promoting accessibility to jobs and services by public transport, walking and cycling; and reducing the need to travel, especially by car. The guidance also recognises the role of walking and cycling in reducing air pollution.

PPS23: Planning and Pollution Control

The Government expects LPAs to adopt a strategic approach to integrate their land use planning processes with plans and strategies for the control, mitigation and removal of pollution, as far as it is possible and practicable to do so. The overall aim of *PPS23* is to ensure the sustainable and beneficial use of land (and in particular

⁶ Extract taken from the : East of England RSS Review Integrated Sustainability Appraisal Scoping Report Topic Paper 11 – Transport, May 2009

⁷ Extract taken from the : East of England RSS Review Integrated Sustainability Appraisal Scoping Report Topic Paper 11 – Transport, May 2009

encouraging reuse of previously developed land in preference to greenfield sites). Within this aim, polluting activities that are necessary for society and the economy should be so sited and planned, and subject to such planning conditions, that their adverse effects are minimised and contained to within acceptable limits. Opportunities should be taken wherever possible to use the development process to assist and encourage the remediation of land already affected by contamination.

Planning Policy Guidance Note 24: Planning and Noise

Planning Policy Guidance 24 (PPG24) guides local authorities in England on the use of their planning powers to minimise the adverse impact of noise. It outlines the considerations to be taken into account in determining planning applications both for noise-sensitive developments and for those activities which generate noise.

It explains the concept of noise exposure categories for residential development and recommends appropriate levels for exposure to different sources of noise.

It also advises on the use of conditions to minimise the impact of noise. Six annexes contain noise exposure categories for dwellings, explain noise levels, give detailed guidance on the assessment of noise from different sources, gives examples of planning conditions, specify noise limits, and advise on insulation of buildings against external noise.

Air Quality Framework Directive (96/62/EC)

This Directive sets a strategic framework for tackling air quality consistently by setting European-wide limit values for 12 air pollutants in a series of daughter directives.

Air Quality Strategy for England, Scotland, Wales and Northern Ireland, DEFRA (2007)

The Government's revised strategy, required under *the Environment Act 1995*, sets out plans to improve and protect air quality in the UK. It considers ambient air quality only, leaving occupational exposure, in-vehicle exposure and indoor air quality to be addressed separately. The strategy sets health-based objectives for nine main air pollutants. The pollutants covered are: Benzene; 1,3-butadiene; carbon monoxide (CO); Lead; nitrogen dioxide (NO₂); Ozone; Particles (PM₁₀); sulphur dioxide (SO₂); polycyclic aromatic hydrocarbons. Performance against these objectives is monitored where people are regularly present and might be exposed to air pollution.

The Evaluation of the Air Quality Strategy indicated that between 1990 and 2001, policies have resulted in a marked decline in concentrations of air pollutants, with an estimated reduction of more than 4,200 premature deaths and 3,500 hospital admissions per annum. The evaluation found that strategy objectives are or will be met on time in most parts of the UK. However, projections show that there will still be exceedences of the objectives for nitrogen dioxide, particulate matter and ozone in some major urban areas and alongside busy roads in particular.

Local Air Quality Management Areas (AQMAs)

Local authorities have statutory duties to carry out regular reviews and assessments against seven of the national objectives, but not for PAHs and ozone (which is affected by pollutants from outside the UK). Where it is found that objectives are unlikely to be met, authorities must designate AQMAs to tackle the problem. Air

quality is also managed by local authorities through their responsibilities for land use planning, local transport and controlling industrial pollution sources. There are also two pollutants (NO₂ and SO₂) with specific objectives aimed at protecting vegetation and ecosystems. Local authorities do not have statutory responsibility for these objectives.

National Emission Ceiling Directive (Great Britain, 2002)

The Directive sets ceilings for each EU Member State for emissions of ammonia, nitrogen oxides, sulphur dioxide and volatile organic compounds (VOCs). These pollutants are primarily responsible for acidification and eutrophication which can be damaging to ecosystems, and the formation of ground-level ozone which can be harmful to both human health and ecosystems.

IPPC Directive

The Directive requires member states to ensure that major industrial installations receive permits to operate only where they can demonstrate best available techniques (BAT) for pollution control. So that industry is not overburdened (compared to other sectors), regulators do not normally require industry to go beyond the best available techniques not entailing excessive cost (BATNEEC) in order to achieve the national objectives where these are tighter than EU limits which the UK is required to meet.

Directive on Ambient Air Quality and Cleaner Air for Europe

This directive is particularly important for PM_{2.5} as it establishes a new 'exposure reduction' approach to try and minimise the significant adverse health effects from fine particulates.

Delivering a Sustainable Transport System, DfT (2008)

This study identifies that the biggest challenge is tackling climate change and growth together. It highlights that non-transport factors – particularly land use planning – can also have a significant impact on the “what, where and how” of transport demand. The study also highlights that improving reliability and reducing congestion will be a priority. The worst option of all – stop-start traffic and gridlock on our roads – is bad for the economy, climate change and our quality of life. The need to increase capacity in some areas will require us to consider a range of solutions, for example whether any new rail lines, including high speed rail, or improved road capacity, may be needed along certain strategic transport corridors.

Other mechanisms

A number of other mechanisms exist for controlling specific sources of air pollution such as industry and transport. The *Environmental Protection Act 1990*, which established the main mechanisms for minimising air pollution from industrial sources, has had a significant role in improving air quality. These mechanisms are now being replaced by systems introduced under the *Pollution Prevention and Control Act 1999/10*, which incorporates implementation of the EU *Integrated Pollution Prevention and Control (IPPC) Directive (96/61/EC)*.

There is also the *Local Authority Pollution Prevention and Control Regime (LAPPC)* for smaller installations outside the scope of the EU IPPC Directive which will

continue to be regulated by local authorities under *Environmental Protection Act* (1990) system. From 6 April 2008 it has been incorporated into the framework of the *Environmental Permitting Regulations 2007*.

8.2 What is the Baseline Situation?

CO2 Emissions

Fenland has one of the highest ratings of CO2 emissions per capita in the Eastern region. Figure 4 shows CO2 emissions (tonnes) per capita for the East of England (based on 2007 figures). Carbon emissions data for 2008 were released by the Department for the Environment and Climate Change in September 2010; however, at the time of writing, we have been unable to access this information.

Figure 4: CO2 emissions (tonnes) per capita across the East of England (Insight East [2007] East of England Regional Economic Atlas: District & Unitary Indicators).

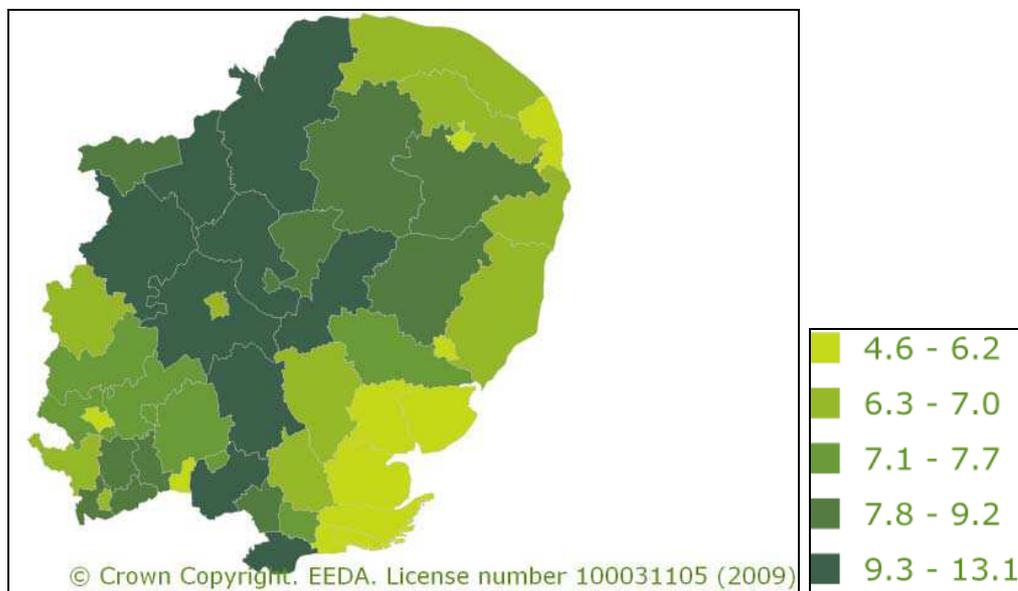


Table 3 gives a summary of estimated Carbon Emissions by End User in 2006 (Source: DEFRA, 2006 – table taken from the Fenland Annual Monitoring Report 2008/9). The results show that the majority of Fenland’s carbon emissions come from industrial and commercial activities.

Table 3: District Estimates Carbon Emissions by End User, Summary 2007 Local Authority

District Estimates Carbon Emissions by End User, Summary 2007 Local Authority	Industry and Commercial	Domestic	Road Transport	LULUCF *	Total	Population (mid-year estimate)	Per capita emissions (t)
Cambridge	413.9	231.7	112.9	0.2	758.6	120.0	6.3
East Cambridgeshire	197.5	195.9	272.7	162.8	828.9	81.0	10.2
Fenland	482.9	220.5	188.7	154.3	1,046.3	91.4	11.5
Huntingdonshire	553.7	388.0	775.9	137.7	1,855.2	167.7	11.1
South Cambridgeshire	753.5	353.5	671.3	17.9	1,796.2	137.3	13.1
Cambridgeshire	2,401.4	1,389.5	2,021.4	472.9	6,285.3	597.4	10.4

Notes: Population estimate is given in 1000s and ONS-based. Totals may not add due to rounding.

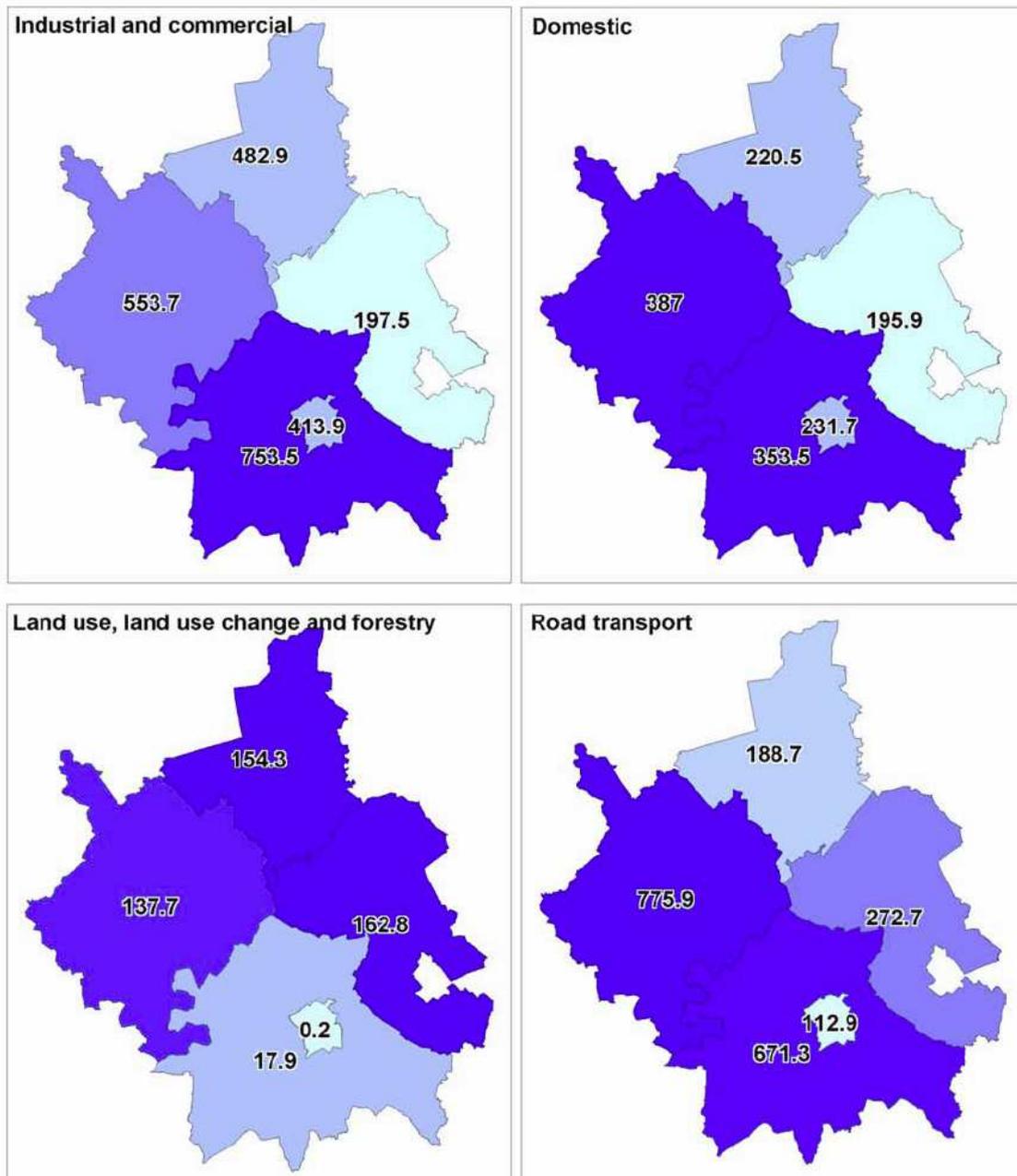
* Land use, land use change and forestry. Source: Department for Environment, Food and Rural Affairs (DEFRA) http://www.decc.gov.uk/en/content/cms/statistics/climate_change/climate_change.aspx

Census records show that the majority of journeys to work made by Fenland's residents were by car/van (63.9%). This is above the average of England and Wales of 55.2%.

In 2007 Fenland had total CO₂ emissions of 1046.3 kt, a decrease of 33.5 kt since 2006. This accounted for 17% of Cambridgeshire's total CO₂ emissions. Fenland had the second highest CO₂ emissions per capita, with 11.5 tonnes per person. Since 2006, emissions in Fenland have decreased in all categories except road transport, which have increased by 1.8 kt.

Figure 5 illustrates CO₂ emissions (kt CO₂) by end user in Cambridgeshire in 2007. The map shows that South Cambridgeshire had the highest levels of industrial and commercial CO₂ emissions, Huntingdonshire had the highest levels of domestic and road transport CO₂ emissions, and East Cambridgeshire had the highest emissions in land use, land use change and forestry.

Figure 5: CO2 emissions (kt CO2) by end user for Cambridgeshire, 2007



Source: Department for Environment, Food and Rural Affairs (DEFRA)
Produced by Cambridgeshire County Council Research Group 2010

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Air Quality

Air quality is primarily measured in terms of concentrations of nitrogen dioxide and fine particles. These pollutants are monitored at a range of sites around Fenland. There are a number of Air Quality Management Areas (AQMA) in Cambridgeshire, the majority of which have been designated as a result of emissions from motor

vehicles.⁸ The Air Quality Management Areas in Fenland District are largely as a result of industrial processes and not just traffic.

Fenland currently has four Air Quality Management Areas (AQMAs), which are sites where annual mean measurements exceed nation Air Quality Objectives. Three AQMAs are in Wisbech and are variously targeting at reducing nitrogen dioxide, PM₁₀, and sulphur dioxide (SO₂). The District Council operate a continuous monitor for PM₁₀ and SO₂ in Wisbech within the AQMA The fourth AQMA is in Whittlesey and is based on high sulphur dioxide measurements.

The impact of growth on air quality Despite falling emissions of key pollutants over the last decade, exceedences are predicted against objectives for nitrogen dioxide, particulate matter and ozone within urban centres and alongside busy roads. At the local level vehicle emissions are cited as the prime reason for the designation of AQMAs. Increased housing provision and employment opportunities are expected to lead to higher traffic levels which will result in changes to the traffic flow characteristics – this is a major cause for concern, particularly in urban areas. It can be seen that concentrating growth in urban areas will often mean targeting growth to areas where there are existing problems with air quality. There is also a need to consider that background levels of air pollution unrelated to traffic may worsen, or at least change, in the future. Rural air pollution from Ozone is set to worsen with climate change, although there is little that can be done to address this within the scope of this appraisal, as it is a transboundary pollutant⁹.

Contaminated Land

Constraints mapping, which includes areas of contaminated land, is used in the determination of planning applications and highlights where remediation may be required before new development can take place.

8.3 What are the issues that should be a particular focus of the appraisal?

- The need to lower greenhouse gas emissions;
- The rural nature of the district and proximity to main transport arteries encourages reliance on the car, which increased traffic volumes, congestion and air pollution. There is a need to support sustainable modes of travel including cycling and walking.
- Previously developed land may be contaminated and therefore may require remediation before new development can take place.
- The impact of growth on air quality – there is a need to ensure air quality issues are not worsened. Urban design and landscaping can play an important part in the mitigation of air quality issues. For example, trees, woods, hedges and shelterbelts take up more pollution from the atmosphere than shorter vegetation or other land uses. Indeed, trees improve air quality by: absorbing gaseous pollutants such as nitrogen dioxide, sulphur dioxide, and ozone; intercepting particulate matter such as dust, pollen, and smoke; releasing oxygen through photosynthesis; and transpiring water and shading

⁸ Source: EERA Review ISA Air Quality Topic Paper, May 2009

⁹ Source: EERA Review ISA Air Quality Topic Paper, May 2009

surfaces, thus lowering local air temperatures, thereby reducing ozone levels¹⁰.

- There is a need to increase the amount of waste that is recycled in the district
- Need to ensure that new growth does not have an adverse impact on the environment from pollutants

8.4 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to pollution:

- Reduce emissions of greenhouse gasses and other pollutants (including air, water, soil, noise, vibration and light)

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

8.5 Evidence Gaps

There is a lack of up to date data on air quality.

¹⁰ Source: EERA Review ISA Air Quality Topic Paper, May 2009

9. HEALTHY, INCLUSIVE AND ACCESSIBLE COMMUNITIES

This theme covers the following SEA topics:

- Population and human health
- Social Inclusiveness

Virtually all spatial planning actions can be seen to lead to impacts on community and well-being, i.e. effects are cross-cutting. This chapter looks at the sustainability context of healthy, inclusive and accessible communities.

9.1 What is the sustainability context?

The Fenland Sustainable Community Strategy (SCS) 2009-2012

All of the SCS priority themes are relevant to 'Healthy, Inclusive and Accessible Communities':

- Safer and Stronger Communities
- Improve health and social wellbeing
- Build economic and sustainable Fenland Communities
- A cleaner and greener district, which everybody can enjoy
- Make sure children and young people have the opportunity to achieve their full potential

Joint Strategic Needs Assessment for Cambridgeshire: Phase 3 (December 2009)

A Joint Strategic Needs Assessment is the means by which Primary Care Trusts (PCTs) and local authorities describe the future health, care and well being needs of the local populations and the strategic direction of service delivery to meet those needs.

Sustainable Communities Plan (ODPM, 2003)

Sustainable Communities: Building for the Future sets out a long-term programme of action for both urban and rural areas, focusing on:

- addressing housing shortage through accelerated provision of housing and affordable housing, as well as tackling homelessness;
- improving the local environment of all communities (liveability); and
- protecting the countryside and using land more effectively.

The CLG define a sustainable community as:

"...places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all."

PPS1: Delivering Sustainable Development

PPS1 stresses the importance of a strong, stable and productive economy and requires planning authorities to ensure that the necessary infrastructure is provided to support new and existing development and housing. It also states that accessibility to jobs and services should be addressed as a means of achieving social cohesions and inclusion.

Planning Policy Guidance Note 13: Transport

PPG13 states that quality of life depends upon transport and easy access to jobs, shopping, leisure facilities and services. *PPG13*'s objectives include the integration of planning and transport at the national, regional, strategic and local level in order to promote more sustainable transport choices (both private travel and for freight movement); promoting accessibility to jobs and services by public transport, walking and cycling; and reducing the need to travel, especially by car. The guidance also recognises the role of walking and cycling in reducing air pollution.

Transport White Paper: The Future of Transport 2030

This White Paper sets out a long-term strategy for the UK. Key objectives include: improving the flow on local roads; improving the reliability of buses; encouraging walking and cycling; better management of road networks; using technology to keep people better informed; promoting school and workplace travel plans and public transport improvements; more demand responsive transport; and making services more accessible to improve travel choice.

Delivering a Sustainable Transport System, DfT (2008)

This study identifies that the biggest challenge is tackling climate change and growth together. It highlights that non-transport factors – particularly land use planning – can also have a significant impact on the “what, where and how” of transport demand. The study also highlights that improving reliability and reducing congestion will be a priority. The worst option of all – stop-start traffic and gridlock on our roads – is bad for the economy, climate change and our quality of life. The need to increase capacity in some areas will require us to consider a range of solutions, for example whether any new rail lines, including high speed rail, or improved road capacity, may be needed along certain strategic transport corridors.

The Health Act (1999)

The *Health Act 1999* places a duty of partnership between the health agencies and local authorities to “*secure and advance the health and welfare of the people.*”

Saving Lives – Our Healthier Nation, Department of Health (1999)

This White Paper is an action plan to tackle poor health. The Government aims to a) improve the health of everyone; and b) the health of the worst off in particular. The actions which are required can be divided into three inter-related levels by individuals, communities, and the Government in partnership. It has four priority areas: cancer, heart disease and strokes, accidents and mental health.

Choosing Health: Making Healthy Choices Easier, Department of Health (2000)

This White paper sets out the key principles for supporting the public to make healthier and more informed choices in regards to their health. The paper aims to contribute to tackling health inequalities in society.

Promoting Effective Citizenship and Community Empowerment: a guide for Local Authorities on enhancing capacity for public participation (ODPM, 2006)

The Third Sector is defined by the Government as “*non-governmental organizations which are value-driven and which principally reinvest their surpluses to further social, environmental or cultural objectives. It includes voluntary and community organisations, charities, social enterprises, cooperatives and mutuals*”.

The following are identified as the six key challenges to enhancing the capacity of citizens to participate more effectively in local decision-making:

- Effective citizenship – identify and communicate the benefits of citizenship and how this supports current Government policy.
- Learning and citizenship – learning should make public participation more meaningful.
- Tailoring to the target audience - reflecting the needs of different social groups, especially marginalised and under-represented people, and ‘the silent majority’.
- Changing council culture - how councils can adjust their institutional set-up.
- Measuring success - evaluating whether people have become more informed or empowered as a result of initiatives.
- Sustainability - recognising that it takes time to build the confidence and ability needed for people to become effective citizens.

Equality

The Equality Act (2010) provides a new cross-cutting legislative framework to protect the rights of individuals and advance equality of opportunity for all; to update, simplify and strengthen the previous legislation; and to deliver a simple, modern and accessible framework of discrimination law which protects individuals from unfair treatment and promotes a fair and more equal society. The Race Relations (Amendment) Act 2000 does have some important implications as it protects against racial discrimination in the fields of housing and the provision of goods, facilities and services. The Race Relations (Amendment) Act 2000 gives public authorities general and specific duties. Public authorities have a duty to make the promotion of racial equality central to their work.

A New Commitment to Neighbourhood Renewal (Social Exclusion Unit, 2001)

This document emphasises the importance of social inclusion by stating that within 10 to 20 years no one should be seriously disadvantaged by where they live. It provides a means of addressing the underlying problems of declining areas, such as high unemployment, weak economies and poor schools. It promotes the use of Local

Strategic Partnerships (LSPs) to unite major service providers from the public, private, community and voluntary sectors.

Our Towns and Cities: the Future – delivering an urban renaissance (ODPM, 2000)

This White Paper builds on the Urban Task Force's 1998 report (which discusses causes of urban decline and recommends solutions to bring people back into towns and cities) by setting out a vision for urban renaissance to make towns and cities vibrant and successful places. Aspects include redeveloping brownfield land, better maintenance of streets and buildings and good quality services.

East of England Plan

We acknowledge that the east of England Plan is no longer statutory but it still provides a useful context and the policies with relevance to this chapter include:

- *Policy SS1: Achieving Sustainable Development* which recognises sustainable development incorporates a commitment to “*a strong, healthy and just society*” and
- *Policy ENV7: Quality in the Built Environment* which directs new developments to “*address crime prevention, community safety and public health*”. In addition, several policies directly address the challenge of deprivation.
- The Plan contains the Regional Transport Strategy (RTS) which gives a clear priority to increasing travel by more sustainable modes, whilst also recognising the importance of the road network. Objectives include:
 - managing travel behaviour and the demand for transport with the aim of reducing the rate of road traffic growth;
 - encouraging efficient use of existing transport infrastructure;
 - enabling the provision of the infrastructure and transport services necessary to support both existing development and that proposed in the spatial strategy; and
 - improving access to jobs, services and leisure facilities.

9.2 What is the baseline situation?

Most of the data in this section is taken from the Fenland Annual demographic and socio-economic information report, prepared by the Cambridgeshire County Council Research Group in March 2010.

Population and demographics

An estimated 92,900 people live in Fenland (Cambridgeshire County Council Research Group (CCCRG) mid-2008 population estimate), with the District's residents accounting for over 16% of Cambridgeshire's population and 10% of the populations of Cambridgeshire and Peterborough combined.

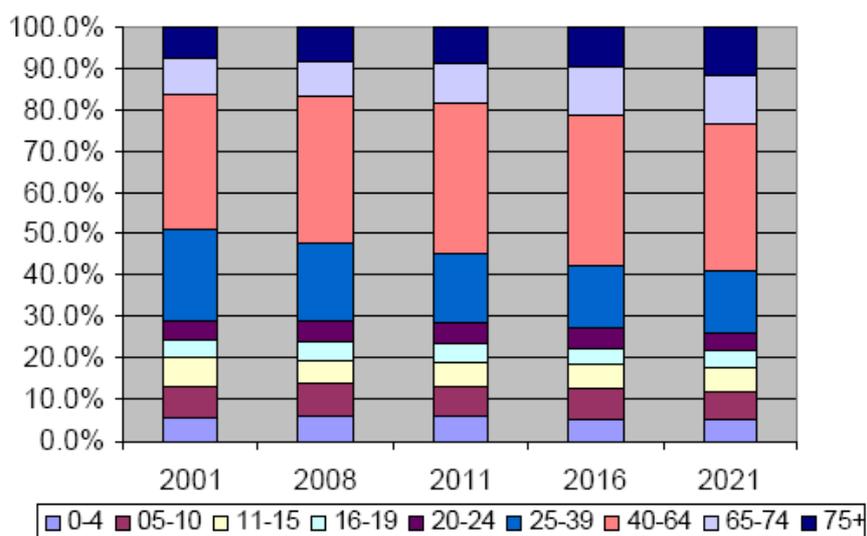
Fenland's population has increased by an average of around 1,300 per year since the 2001 Census. Total growth over the period 2001-2008 has been 9,200 (11%). This is the second highest percentage growth in Cambridgeshire behind East Cambridgeshire (12%). Fenland also experienced a higher percentage growth than the East of England region and England.

By 2021, Fenland's population is forecast to increase to 100,200. This represents a growth of 7.9% at an annual average of 560. The CCCRG mid-2008 population forecasts suggest that almost all of that change will be attributable to net migration (the difference between people leaving and arriving in the area) with natural change (the difference between births and deaths) balancing to nearly zero. The projection of zero or negative natural change in Fenland is also seen in the Office for National Statistics (ONS) Sub-National Population Projections 2006.

Age structure

Work undertaken by the Cambridgeshire County Council Research Group shows that Fenland has an ageing population. Figure 6 shows that in 2021, the proportion of people younger than 40 is expected to drop to 41% from 51% in 2001. The highest growth will occur in the 65+ age group, from 16% in 2001 to nearly 24% in 2021. The biggest decline will occur in the 25-39 age group, from 22% in 2001 to approximately 15% in 2021. The proportion of under-20s in Fenland is expected to drop slightly, from nearly 25% in 2001 to 22% in 2021.

Figure 6: Age structure of the population in Fenland (2001-2021)



Source: Fenland Annual demographic and socio-economic information report, March 2010 (Cambridgeshire County Council Research Group).

The combination of the forecast age structure, the population forecast and expected components of change (natural change and net migration) suggests that between 2008 and 2021 there will be a net loss of young adults from Fenland due to migration, and a net gain of older people due to the ageing of the resident population and in-migration. This is a key issue for the LDF.

Migration

Net migration

Net migration is the balance of people leaving (out-migration) and entering the District to live (in-migration). Migration can be internal (from within the UK) or international. Fenland's recent rapid growth is largely the result of people moving into the District from elsewhere. The CCCRG mid-2008 estimate suggests a net migration figure for Fenland of approximately 1,000 between 2007 and 2008, but this total is not broken down into internal and international components. However, CCCRG have derived an indication of the different proportions. The ONS mid-2008 population estimate internal migration figures for Fenland, which are based on NHS GP registrations, show that there was a higher inflow of UK migrants than outflow, resulting in net internal migration of around 400. From this it is inferred that perhaps 600 international migrants may have come to reside in Fenland in 2008. This is not an official figure, however, and given the paucity of supporting evidence CCCRG have concluded that it may be more accurate to conclude simply that Fenland experienced net in-migration, at least half of which was likely due to international migration.

Further examination of the ONS internal migration figures suggests that around 34% of the people moving to Fenland were over 45 years of age, compared to 21% for the East of England region. This means that a higher proportion of people moving to Fenland is from older age groups. District comparisons highlight that Fenland has the second lowest in-migration with Huntingdonshire the lowest. Cambridge City is the only district showing net out-migration (of internal migrants).

Migrant workers

Recent immigration from outside the UK has included workers attracted by opportunities for employment in a range of industries, particularly (for Fenland) in the agricultural sector. Migrant workers have traditionally formed an important sector of the seasonal labour force; recently, migrant communities are becoming more established and less 'seasonal'. There has been a distinct increase in migrant workers numbers since the last Census. After the accession to the EU in May 2004 of several European countries (Poland, Lithuania, Latvia, Estonia, Hungary, Czech Republic, Slovakia, Slovenia) nationals of these countries can work in the UK under the Workers Registration Scheme (WRS), and after working legally for 12 months without a break, have full rights to free movement and will no longer need to register under the WRS. WRS data for Fenland shows that since the start of the programme in 2004 and up to September 2009 approximately 7,000 migrant workers registered with the scheme, which is the highest number in the County (CCCRG, March 2010). The majority were Polish and Lithuanian.

National Insurance Number (NINo) data also provides a broad indication of the number of migrants in an area. NINos are required for employment or self-employment purposes, or to claim benefits or tax credits. The Department for Work and Pensions (DWP) has responsibility for allocating NINos to overseas nationals.⁴ De-registration is not required under this scheme. As a consequence the NINos data only provides information on inflows of workers. In 2008/09, 1,480 NINos were issued to overseas nationals living in Fenland. Of these, 94% were to migrants from Eastern Europe.

Since WRS and NINo registrations only record inflows and not outflows, neither can be used to give a robust indication of numbers of migrants residing in an area.

Recent ONS research shows high rates of re-migration – migrants leaving the UK – in 2008. Given the uncertainties involved it is not known how many migrants have stayed in Fenland.

Health

The following section includes some summary measures of health and health status for Fenland and is taken from the Fenland Annual demographic and socio-economic information report, March 2010 (Cambridgeshire County Council Research Group). It includes data from a number of sources, drawn from varying releases of data by the UK Statistics Authority (previously the Office for National Statistics: ONS).

Health status of the Fenland population

Average health measures for Fenland are generally worse than average for England. Fenland has a higher rate of mortality from all causes than England and Cambridgeshire. Mortality from land traffic accidents is significantly worse for Fenland compared to the national average.¹¹

Older people constitute a much higher share of Fenland's population than any of Cambridgeshire's other districts; nearly one person in every five (19.5%) is over 65 and one in every seven Fenland households (15%) is a pensioner living on their own. Older people are often stereotyped as a homogeneous group who are not very active, dependent on others, with failing physical and mental health and dependency, in which women far outnumber men. But the national "Tomorrow" project points out that the average 75 year old can expect that almost 60% of the rest of their life will be free of mobility difficulties. Fenland's 'Golden Age' campaigns avoid that narrow thinking and engage older people in identifying their priorities for the future and looks at how society and public services can support their healthy independent lives and their contribution to our communities. The wider determinants of health, e.g. housing, feeling safe and lifestyle choices, involve actions across all the themes of the Fenland Community Strategy.

Life expectancy at birth in Fenland

Based on 2006-08 mortality data, life expectancy at birth is lower for Fenland than for England as a whole, but the difference is not statistically significant. For males life expectancy is 77.3 years, which is 0.6 years lower than England. For females it is 81.3 years, which is 0.7 years lower than England. Women in Fenland can expect to live 4.0 years longer than men. In comparison to the Cambridgeshire averages, life expectancy in Fenland is statistically significantly lower both for males and females, by 2.0 and 1.8 years respectively.

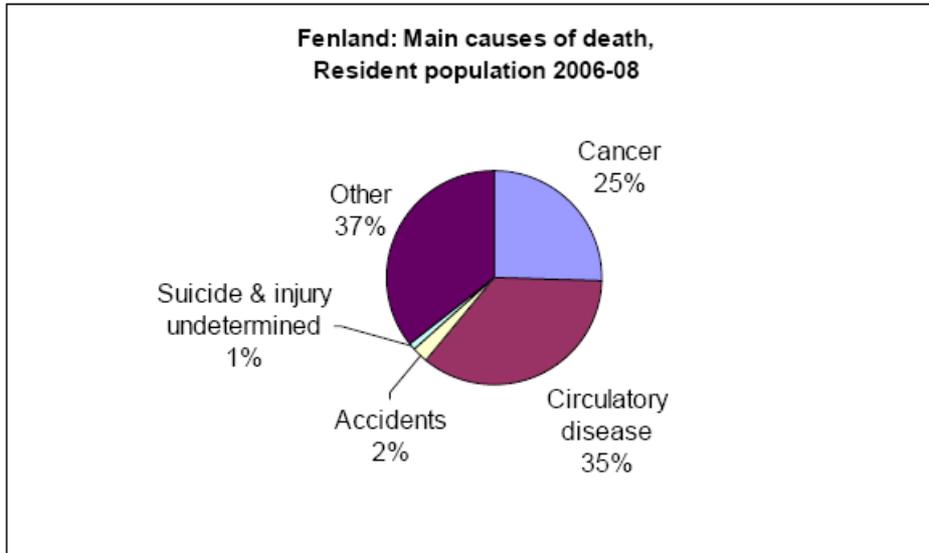
Life expectancy is well below the East of England average. Fenland has a local Spearhead Action Plan to focus on closing the gap. Premature death rates from heart disease, stroke and cancers for both men and women have been decreasing at the same rate as the national average. There are inequalities; residents of the healthiest wards can expect to live 5.7 years longer than those in the least healthy. In the district, levels of deprivation increase from south to north (Taken from the Fenland SCS).

¹¹ Joint Strategic Needs Assessment for Cambridgeshire - Phase 3 - December 2009. Appendix: NHS Cluster Dataset based on 2005-2007 data at <http://www.cambridgeshirepct.nhs.uk/default.asp?id=656>

Main causes of death

Figure 7 shows the proportion of deaths for selected causes of death among Fenland's resident population. The most common cause of death is circulatory disease at 35% of all deaths, followed by cancer at 25%.

Figure 7: Proportion of deaths for selected causes of mortality in Fenland, 2006-08

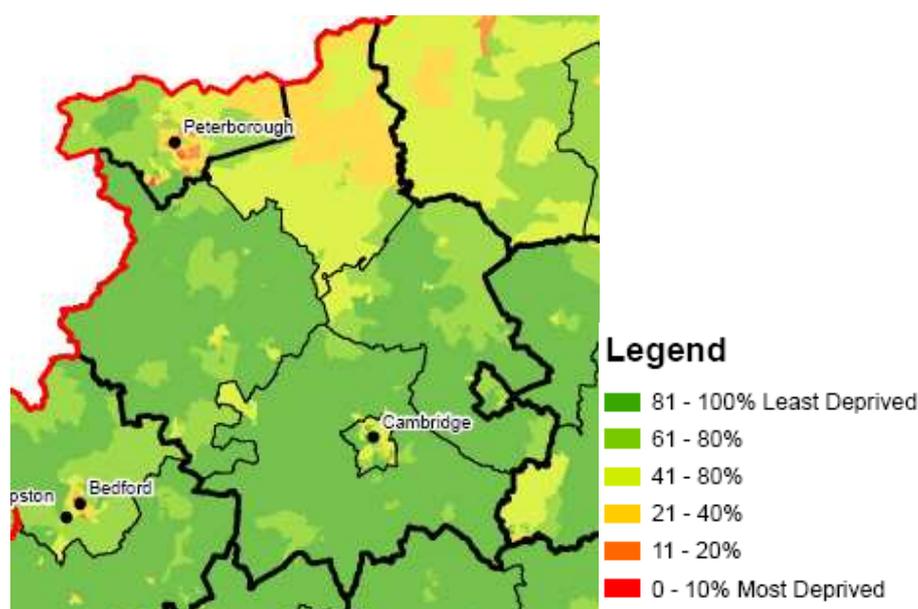


Source: Fenland Annual demographic and socio-economic information report, March 2010 (Cambridgeshire County Council Research Group).

Health Deprivation and Disability

The *Health Deprivation and Disability Domain* of the Index of Multiple Deprivation identifies areas with relatively high rates of people who die prematurely or whose quality of life is impaired by poor health or who are disabled, across the whole population. Figure 8 shows Fenland in comparison to Peterborough and the rest of Cambridgeshire; and shows that Fenland is the most deprived in terms of health across the County.

Figure 8: Health deprivation, 2007 (Cambridgeshire and Peterborough).



Source: EERA Review ISA Scoping Report, May 2009.

There are high levels of obesity and diabetes, coupled with low rates of healthy eating and higher than average levels of smoking. Teenage pregnancy rates are also an issue for the district.

Health services can be difficult for some groups to access and 'equity audits' focus on identifying priorities for action.

Ethnicity

The 2001 Census data shows that Fenland was less ethnically diverse than other parts of England, with a greater than average proportion of the population being white. 96.9% of the population was White British and a further 1.7% were White Irish and White Other. Fewer than 1,150 people identified as being from other ethnic groups. The largest identified groups within that smaller population were Indian, mixed White and Asian, mixed White and Black Caribbean, and Chinese, which overall did not represent more than 0.2% of the population.

Travellers were not identified as an ethnic group in the 2001 Census though this will change in the 2011 Census. The Cambridge Area Travellers Needs Assessment 2005 estimated that in Cambridgeshire and Peterborough there were 6,080 Gypsy/Travellers, making them one of the largest minority ethnic groups in the area. Fenland's Travellers estimate was 2,850 in 2005, which equated to 3.3% of the 2005 district population, the highest figure in Cambridgeshire and Peterborough. In Fenland, much of the traveller population is settled with more than half of the households are in housing rather than caravans.

Housing types in Fenland

There are currently 42,100 dwellings in Fenland (HSSA, 2008/9). In November 2007, Fenland District Council transferred its social housing stock to Roddons Housing Association. Social rented stock within the District accounts for 13% of the total dwelling stock (HSSA, 2006). The dominant tenure type is owner occupation (75%),

followed by social renting (14%), then renting privately (11%), with a very small amount of shared equity (0.2%) (Census 2001).

Detached houses are the most common type of dwelling, followed by semi-detached (see Figure 5 below). There are a small number of temporary structures (1%) of all house types and at the time of the Census there were also a small number of people in shared accommodation (4%). Last year there were an estimated 600 Houses in Multiple Occupancy (HMOs) (HSSA, 2009).

The average cost of buying a home in Fenland in September 2009 was £148,977 (Hometrack – Sales and Valuation figure) – around £81,210 cheaper than the average for the rest of the County.

Deprivation and Social Inclusion

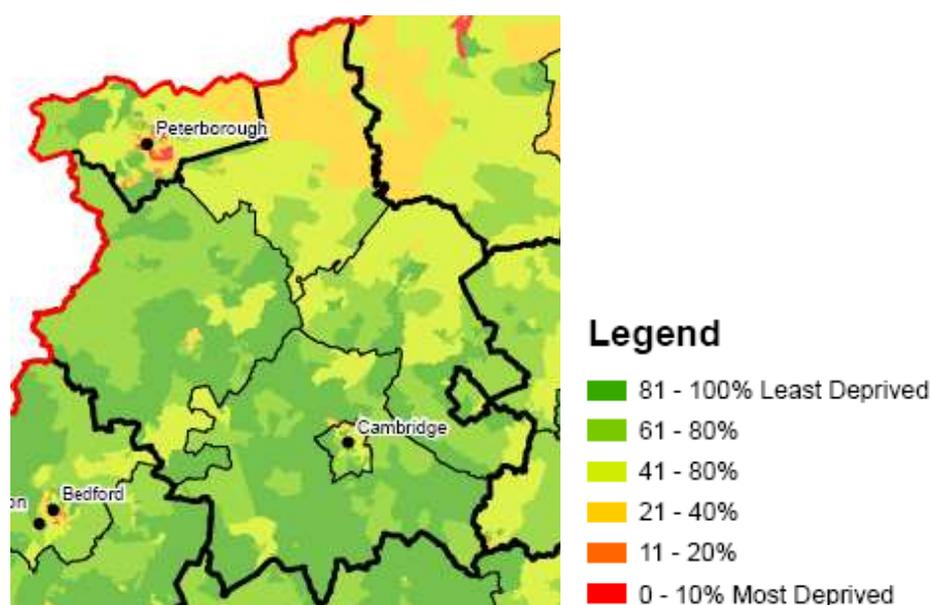
“Deprivation in Cambridgeshire - Individual Indices of Deprivation 2007”, includes full details of deprivation on the seven separate domains: Income deprivation; Employment deprivation; Health deprivation and disability; Education, skills and training deprivation; Barriers to housing and services; Living environment deprivation; and Crime.

Fenland is the most deprived district in Cambridgeshire. Fenland’s average IMD score is ranked 139 out of 354 local authorities (districts and unitary authorities) in England, where the local authority ranked as 1 is the most deprived and 354 is the least deprived. This shows that, as a whole, while Fenland is less deprived than many other areas in the country, it is still among the most deprived 40% of areas. The East of England Development Agency has highlighted the relative decline in the IMD position between the 2004 and 2007 indices.

The most deprived areas of Fenland are in Wisbech and its surrounding rural area. Figure 9 shows the level of deprivation in Fenland compared to Peterborough and the rest of Cambridgeshire. The most deprived areas of Wisbech are in Waterlees and Staithe wards, which contain LSOAs among the most deprived 5% in the County. Two LSOAs in Waterlees are ranked within the most deprived 10% nationally, which shows that they are among the most deprived areas in England.

Fenland has 41% of Cambridgeshire’s most deprived quintile of LSOAs (30 out of 73), with Income, Employment, Health and Disability, Education, and Skills and Training being Fenland’s primary deprivation domains. The District is also ranked high on the Income Deprivation Affecting Children (IDACI) and Income Deprivation Affecting Older People (IDAOPI). Some of the District’s areas, particularly in Wisbech and its surrounding rural area, are affected by Crime deprivation; Clarkson, Waterlees and Hill wards, for example, are ranked among 10% most deprived nationally. Fenland is less affected by Barriers to housing and services, and Living environment deprivation than other parts of Cambridgeshire.

Figure 9: Multiple deprivation, 2007 (Cambridgeshire and Peterborough)



Source: EERA Review ISA Scoping Report, May 2009.

The Cambridgeshire Local Economic Assessment highlights that Fenland has a large Gypsy/Traveller population living with severe economic disadvantage and social exclusion:

- The CLG bi-annual count of Gypsy and Traveller caravans shows the majority of sites are based in South Cambridgeshire and Fenland. The Gypsy/Traveller population in Cambridgeshire is estimated at approximately 6800, making them the second largest ethnic minority in the area.
- Most gypsies/travellers prefer self-employment, in such occupations as farm and land work.
- A decline in traditional farm work and increased competition from cheaper immigrant labour means Gypsies/Travellers find it increasingly difficult to make a living from traditional occupations, contributing to severe economic disadvantage and social exclusion.

The Assessment also highlights high levels of education, skills and training deprivation and pockets of nationally significant deprivation:

- Fenland is the only Greater Cambridge district that contains small areas among the most deprived in national terms. These are centred around the Waterlees estate in Wisbech. See Map 2 in Appendices
- One in five of Fenlands wards are among the most deprived national 20% in terms of education, skills and training.

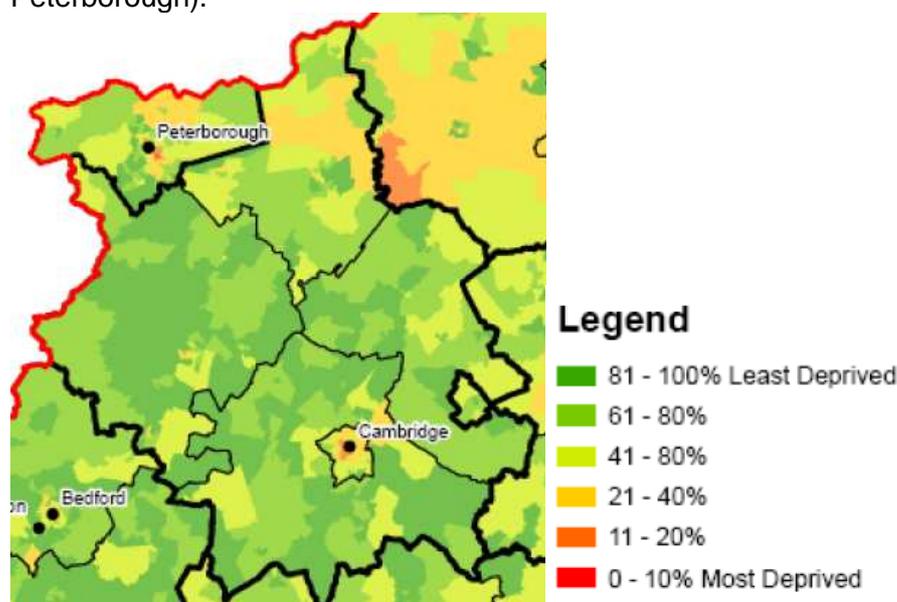
Living environment

The *Living Environment Deprivation* domain of the Index of Multiple Deprivation focuses on deprivation with respect to characteristics of the living environment. It comprises two sub-domains: the 'indoors' living environment which measures the quality of housing and the 'outdoors' living environment which contains two measures

about air quality and road traffic accidents. Figure 10 shows that Fenland has a relatively high quality living environment.

In terms of quality of the 'living environment' two keys means for addressing this through the LDF will be to promote high quality green infrastructure (see Chapter 5 – Biodiversity) and to take account of existing heritage assets when locating and designing new development (see chapter 6 – Landscape and Cultural Heritage).

Figure 10: Indices of Deprivation 2007: Living Environment (Cambridgeshire and Peterborough).



Source: EERA Review ISA Scoping Report, May 2009.

Reliance on the car

A regional reliance on the car has increased problems with congestion, heightened by bus patronage decline and a higher proportion of households with more than one car. This is partly attributed towards the rural nature large parts of the region. In such areas the car will remain the transport mode of choice in the future.¹²

Census records show that the majority of journeys to work made by Fenland's residents were by car/van (63.9%). This is above the average of England and Wales of 55.2%.

Rights of Way

There is a network of rights of way in Fenland, which can be viewed at

<http://my.cambridgeshire.gov.uk/mycambridgeshire.aspx?&tab=2&layers=Public%20Rights%20of%20Way&layers=Permissive%20Access%20Paths&layers=Permissive%20Access&layers=Public%20Rights%20of%20Way%20-%20PRoW>

Only 10% of the total length of public rights of way in the county is in Fenland District (Source: Cambridgeshire County Council).

¹² Source: East of England RSS Review Integrated Sustainability Appraisal Scoping Report Topic Paper 11 – Transport, May 2009

Cambridgeshire County Council is keen to promote the importance of horse riding (as a leisure and business activity) within the District.

Community Safety / Crime

Cambridgeshire has five Crime & Disorder Reduction Partnerships (CDRP; also known as Community Safety Partnerships), one in each of the County's districts. Each CDRP has a statutory duty to reduce crime and disorder in its area. In contrast to previous periods, when targets were set by the Home Office, each area has recently set their own targets and priorities and outlined them in plans for the period 2008-2011. These Community Safety Plans are refreshed each year.

For the second year, Fenland district has recorded a small decrease in the total level of crime.

Table 4: Total police recorded crime by year

	Nov - 03	Nov- 04	Nov- 05	Nov- 06	Nov- 07	Nov- 08	Nov- 09
All recorded crime	8,327	8,383	6,827	7,135	7,440	7,177	6,941

Sense of community

Before it was abolished in 2010, the Place Survey replaced the BVPI General Survey and was used to measure 18 National Indicators. Each of Cambridgeshire's district councils conducted the Place Survey in 2008. Results have been derived from national datasets held by the Department for Communities and Local Government that were released during the course of 2009. Below is a summary of some of the results.

- Most important things factors in making somewhere a good place to live:
 - The level of crime (54%) was the most indicated category followed by health services (49%) and clean streets (41%).
 - Affordable decent housing is also a prominent issue in the District.
- Satisfaction with local area as a place to live:
 - 75% of residents in Fenland reported that they are satisfied with their local area as a place to live. This was the lowest in Cambridgeshire.
 - The Fenland rate is lower than both the national (80%) and regional (83%) rates for this indicator.
- Community Cohesion:
 - Only 62% of respondents in Fenland agreed with the statement that their local area is a place where people from different backgrounds get on well together.

- The Fenland rate is significantly lower than the national (76%), regional (78%) and county (79%) rates.
- Fenland's (62%) rate is amongst the worst in the country.

9.3 What are the issues that should be a particular focus of the appraisal?

- Access to decent, affordable homes.
- Need for safe communities
- Need to reduce deprivation
- Access to services in both rural and urban areas
- Improve health and reduce health inequalities in the district
- Meet the changing demographic of the district
- Meeting the needs of the gypsy and traveller population
- Meeting the needs of the ageing population
- Sense of place and sense of community - New communities must be well designed, including taking into account the historic environment, and planned for alongside green infrastructure considerations.
- There is a need to plan to ensure adequate access to multifunctional green space which is present at a variety of spatial scales (green infrastructure), in part by improving rights of way across the district.
- Cross cutting issues: There is a need to tackle wider sustainability issues that have a more indirect negative impact on community and well-being (e.g. measures to adapt to climate change), and promote actions that have cross-cutting benefits (e.g. green infrastructure).
- Tackling High car dependency
- Reducing the need to travel
- Promote the movement of goods and people by sustainable modes

9.4 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to Healthy, inclusive and accessible communities:

- Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities and community activities); and ensure all groups thrive in safe environments and decent, affordable homes
- Create and enhance multifunctional open space that is accessible, links with a high quality green infrastructure network and improves opportunities for people to access and appreciate wildlife and wild places
- Redress inequalities related to age, gender, disability, race, faith, location and income

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

It can be seen that achieving a more sustainable transport system in the district is not an end in itself, but a means to achieving a wide range of sustainability objectives. This chapter recognises the cross-cutting nature of sustainability effects relating to transport.

10. ECONOMIC ACTIVITY

10.1 What is the Sustainability Context?

The Fenland Sustainable Community Strategy 2009 - 2012

The relevant SCS priority theme in this case is 'Build economic and sustainable Fenland Communities'. This theme has various sub-priorities:

- Developing social enterprise and the third sector
- Developing sustainable market towns and villages (including housing)
- Improving the level of skills, including in the workplace
- Increasing new business opportunities

Fenland's Economic Development Strategy 2007-2027

The purpose of the Economic Development Strategy is to drive forward the Fenland Economy, by:

- Retaining the firms already based in the District;
- Attracting inward investment to allow these firms to expand;
- Facilitating the start-up of incubator businesses; and,
- Promoting sites to attract high-end Small and Medium Enterprises (SME's).

The Fenland Economic Development Strategy is currently under review and will be prepared alongside a revised Employment Land Review for the district.

Consultation with the Economic Development Team

The following issues have been raised through discussions with the Economic Development Team:

- There is little to no night time economy;
- There are no quality hotels;
- There is a poor tourism base;
- There is an over-reliance on Distribution for future employment provision – See latest CCC Monitoring figures;
- The Districts workforce skills base; and, general educational achievement is low;
- Out-commuting pulls too many people out of the District to other areas for work – 40 % of Fenland's working population.

PPS1: Delivering Sustainable Development

PPS1 requires planning authorities to ensure that the necessary infrastructure is provided to support new and existing economic development and housing and emphasises the importance of a strong, stable and productive economy. Accessibility to jobs and services are also addressed as a means of achieving social cohesion and inclusion. The Statement also recognises that economic development can deliver environmental and social benefits.

PPS4: Planning for Sustainable Economic Development

To help achieve sustainable economic growth, the Government's objectives for planning are to:

- build prosperous communities by improving the economic performance of cities, towns, regions, sub-regions and local areas, both urban and rural;
- reduce gaps in economic growth rates, promoting regeneration and tackling deprivation;
- deliver more sustainable patterns of development, reducing the need to travel, especially by car;
- promote the vitality and viability of town and other centres as important places for communities. To do this, the Government wants:
 - competition between retailers and enhanced consumer choice through the provision of innovative and efficient shopping, leisure, tourism and local services in town centres, which allow genuine choice to meet the needs of the entire community (particularly socially excluded groups);
 - and the historic, archaeological and architectural heritage of centres to be conserved and, where appropriate, enhanced to provide a sense of place and a focus for the community and for civic activity.
 - new economic growth and development of main town centre uses to be focused in existing centres, with the aim of offering a wide range of services to communities in an attractive and safe environment and remedying deficiencies in provision in areas with poor access to facilities;
- raise the quality of life and the environment in rural areas by promoting thriving, inclusive and locally distinctive rural communities whilst continuing to protect the open countryside for the benefit of all.

PPS4 promotes:

- Setting out a clear economic vision and strategy for their area which positively and proactively encouraging sustainable economic growth identifying priority areas with high levels of deprivation that should be prioritised for regeneration investment, having regard to the character of the area and the need for a high quality environment;
- Supporting existing business sectors, taking account of whether they are expanding or contracting and, where possible, planning for new or emerging sectors, such as those producing low carbon goods or services;
- Positively planning for the location, promotion and expansion of clusters or networks of knowledge driven or high technology industries (guided by regional planning);
- Seeking to make the most efficient and effective use of land, prioritising previously developed land which is suitable for re-use, but recognising the different location requirements of businesses;

- Identifying, protecting and promoting key distribution networks, and locating or co-locating developments which generate substantial transport movements in locations that are accessible (including by rail and water transport where feasible), avoiding congestion and preserving local amenity as far as possible;
- Planning for the delivery of the sustainable transport and other infrastructure needed to support planned economic development;
- Encouraging new uses for vacant or derelict buildings, including historic buildings;
- Consideration of how sites for different business types can be delivered; and
- Facilitating new working practices such as live/work.

Regional Economic Strategy (Inventing our Future – Collective action for a sustainable economy, 2008)

The regional economic strategy (RES) sets out a vision, targets and priorities for the East of England with the aim of driving forward as a globally competitive region.

The RES highlights major challenges. This includes addressing the recent slowdown in economic performance; the impacts of the current credit crunch on financial and housing markets; rising food, energy, fuel and commodity prices; skills and infrastructure deficits; developing a more sustainable economy and improving economic development leadership and delivery.

The regional economic strategy sets out targets and priorities to make the East of England an exemplar in sustainable economic growth. In so doing, it understands the complex effects of economic growth and reflects a responsibility to promote and enhance the environmental, economic and social well-being of everyone in the East of England, both now and for future generations. The strategy has therefore adopted the shared UK principles of sustainable development, as set out in the national strategy securing the Future.

The strategic ambitions contained in the RES for the Greater Cambridge Sub-region area are:

- diversify and improve performance of the economy of market towns within the sub-region
- to continually upgrade the skills of local communities and ensure an increased supply of soft and technical skills into the local labour market
- deliver major environmental enhancement of Cambridge, surrounding settlements and create new habitats of international importance through a coherent programme and marketing of the Great Fen, Wicken Fen, the Ouse Washes, Needingworth and Fen Drayton initiatives
- preserve the unique character of the historic core of Cambridge and the distinctiveness of the sub-region's market towns.

The RES advocates a region that is internationally competitive with a global reputation for innovation and business growth that harnesses and develops the talents and creativity of all and is at the forefront of a low carbon and resource

efficient economy. In this context the impacts of the development on the following headline regional ambitions are likely to be particularly significant:

- Productivity and prosperity (Annual growth in real workplace-based GVA over 2008 – 2031)
 - Per capita at 2.3 per cent
 - Per worker at 2.1 per cent
- Employment (Employment rate by 2031)
 - Working-age population at 80 per cent
 - 16–74 population at 70 per cent
- Skills (Share of working-age population with qualifications by 2020 [aged 19 to state pension age])
 - NVQ level 2 or equivalent qualification and above 90 per cent
 - NVQ level 3 or equivalent qualification and above 68 per cent
 - NVQ level 4 or equivalent qualification and above 40 per cent
- Inequality (Earnings)
 - Level of lower-quartile to average incomes by 2031 at 60 per cent
- Greenhouse gases (End-user-attributed CO2 emissions by 2031)
 - Reduction on 1990 baseline level by 60 per cent
- Water resources (Household per capita consumption of water)
 - Reduction on 2008 baseline level by 2030 by 20 per cent
 - Per capita consumption in 2030 by 120 litres per head per day

From recession to recovery: the local dimension (LGA, 2008)

This report for the Local Government Association highlights that in a recession, there are likely to be strong local variations in economic performance within regions. Uniform contraction of economic activity and employment in every place is very unlikely to happen, as different sectors of the economy respond differently to a recession (in particular, sectors that remain internationally competitive like computing and R&D, or where demand is not cyclical, like health and education, will perform better), and the number of jobs in each sector varies from place to place. The report concludes that the case for devolved economic decision-making becomes more marked under bad economic conditions, and that decisions about economic interventions need to be taken at the level of the functional economic area.

Other policies, strategies and reports

Various national policies, strategies and reports have relevance to the district's economy and are discussed below and summarised in Table 5.

Table 5: Other national policies, strategies and reports

Policy / Strategy / Report	Description
Competing in the global economy; the innovation challenge ⁸	Builds on the economic measures to stimulate innovation set out in previous White Papers ⁹ , including the proper funding of science, incentives for knowledge transfer and innovation-driven regional clusters.
Trade and Investment White Paper: Making globalisation a force for good ¹⁰	Sets out the Government's long term vision of using trade policy to boost global prosperity, and how it intends to ensure that globalisation benefits every UK region. States that the UK Government should support British-based business to adjust to more competitive global markets by supporting science and innovation, the development of new technologies and more efficient ways of working, as well as through raising skills levels to create a more flexible and productive workforce.
Innovation White Paper: Innovation Nation ¹¹	This white paper aims to broaden innovation policy to include more than the traditional focus on science, technology and research. The role of promoting market demand is highlighted.
DTI 10 year Science and Innovation Investment Framework ¹²	The Framework sets out the Government's ambition for UK science and innovation over a 10 year period, in particular their contribution to economic growth and public services, and the attributes and funding arrangements of a research system capable of delivering this.
Leitch Review of Skills, Prosperity for all in the global economy - world class skills ¹³	States that the UK must urgently raise achievements at all levels of skills and should commit to becoming a world leader in skills by 2020.
Raising Expectations: Enabling the System to Deliver ¹⁴	This White Paper outlines wide-ranging reforms to the provision of skills and training to young people and adults, including details of both the Skills Funding Agency and the National Apprenticeship Service.
<i>Education White Papers</i> ¹⁵ & ¹⁶	States the need to design education around the needs of the individual and increased parental say in how schools are run. The Education and Inspections Act (2006) gives legal force to many of these proposals.
Draft Apprenticeships Bill ¹⁷	The Bill describes the functions of the new National Apprenticeship Service and also includes a provision to ensure that young people in schools are fully informed about vocational training opportunities.

Source: East of England RSS Review Integrated Sustainability Appraisal Scoping Report Topic Paper 5 - Economy and Employment¹³

¹³ ⁸ DfT (2003) *Competing in the global economy: the innovation challenge* [online] available at: <http://www.berr.gov.uk/files/file12093.pdf>

⁹ 'Our competitive future –Building a knowledge driven economy' (1998); "Excellence and Opportunity – a Science and Innovation Policy for the 21st Century" (2000); and "Opportunity for All in a World of Change – Enterprise, Skills and Innovation" (2001).

¹⁰ DTI (2004) *Making globalisation a force for good* [online] available at: <http://www.berr.gov.uk/whatwedo/europeandtrade/tradepolicy/t-i-white-paper/page23431.html>

¹¹ DIUS (2008). *Innovation Nation* [online] available at: <http://www.dius.gov.uk/publications/scienceinnovation.pdf>

¹² HM Treasury (2004) *Science and Innovation investment framework 2004-2014* [online] available at: <http://www.berr.gov.uk/files/file31810.pdf>

¹³ HM Treasury (2006) *Prosperity for all in the global economy – world class skills* [online] available at: www.dcsf.gov.uk/skillsstrategy/uploads/documents/Leitch%20Review.pdf

¹⁴ DIUS & DCSF (2008) *Raising expectations: enabling the system to deliver* [online] available at: http://www.dcsf.gov.uk/publications/raisingexpectationswhitepaper/pdfs/Raising_Expectations.pdf

¹⁵ DfES (2005) *The Schools White Paper: higher standards, better schools for all* [online] available at: <http://www.publications.parliament.uk/pa/cm200506/cmselect/cmmeduski/633/633.pdf>

¹⁶ DCSF (2005) *14-19 Education and skills* [online] available at: <http://www.dcsf.gov.uk/publications/14-19educationandskills/pdfs/14-19WhitePaper.pdf>

10.2 What is the baseline situation?

Employment

(Source: Annual demographic and socio-economic information report, March 2010, produced by: Cambridgeshire County Council Research Group)

The results of the Annual Population Survey (APS) show that the proportion of Fenland's people who are of working age is 59%, which is below the national figure of 62%. The proportion of the working age (16 years old to pensionable age) population that is economically active (working or seeking work) is 85%, which is above the national figure of 79%.

According to 2007 Jobs Density figures, Fenland's labour demand is not as high as the available workforce, with a jobs-to-working age population ratio of 0.72.

The 2001 Census shows that about 63% of the employed residents of Fenland work within the District, with 14% working in Peterborough, the largest out-commuting destination. Huntingdon and Cambridge are also significant attractions.

The APS gives a wide measure of unemployment, which complies with the International Labour Office (ILO) definition. It includes people seeking work, irrespective of eligibility for Jobseekers Allowance (JSA). The June 2009 figure for the District's unemployment rate (the % of economically active people aged 16 and over) was 6.7%, while the figure for England figure is 6.9%.¹⁰ The narrow rate, claimant unemployment, for the District is however above both the national and East of England figures. In December 2009 the proportion of JSA claimants (% of all people of working age) in was 4.3% for Fenland, 3.3% for East of England, and 4.1% for England (see Table 5). The rate of JSA claimants in Fenland in December 2009 was higher than in December 2008 by 1.2 percentage points, and higher than in November 2009 by 0.1 of a percentage point (see Figure 6 below). According to DWP Benefits figures, rates of Out-of-Work Benefits claimants (% of all people of working age) in Fenland in May 2009 were higher than in May 2008 by 2.2 percentage points, with 14.2% or 7,550 people claiming benefits in May 2009, compared to 12.0% or 6,400 people in May 2008.

While employment rates are high at regional level, there are significant variations within the East of England (see Figure 11). Employment rates Fenland fall substantially below the average.

The Local Economic Assessment prepared by Cambridgeshire County Council in 2010 shows that overall employment rate in Fenland is just higher than national average (72%) and is stable. Average employee earnings are low (£421) but are slowly rising. Working age people on out of work benefits is high (14%) and rising.

High level of out commuting, particularly of lower skilled workers.

- Nearly one third of Fenland residents commute to jobs in Huntingdonshire and Peterborough.
- Fenland also attracts about 12% of its workers from Kings Lynn and West Norfolk.

- Fenland is the only Cambridgeshire district where residential wages are significantly lower than workplace wages, with most districts showing the opposite pattern. This suggests that many Fenland residents are not qualified to take up the better paid jobs that are available in the district. It also suggests that people recruited to fill these jobs choose not to move into the district but would rather commute from outside.

High dependence on seasonal migrant workers in agricultural industry, many of whom are working below their potential

- Fenland attracts a relatively high number of migrant workers (particularly into the agricultural sector) but it is likely that the turnover of this population is high with many not remaining in the area very long.
- Research suggests that in some sectors, the businesses would not be able to function to full capacity if migrant workers were not available – the largest employers of migrant workers in agriculture and horticulture are thought to be based around Ely and Wisbech (WLRI, 2005)
- Research also suggests that many migrant workers' skills are not being used to their full potential

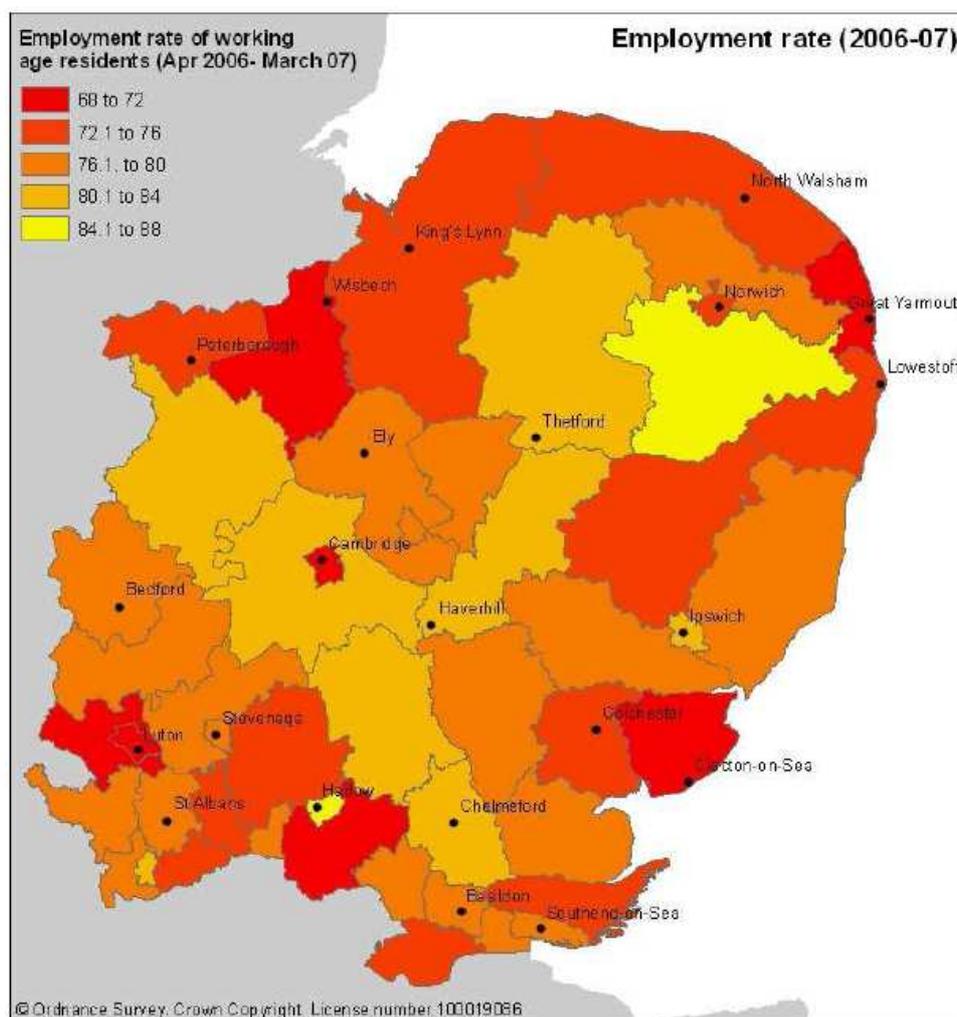
Gender disparities among the economically active

- The employment rates of economically active women are significantly lower than elsewhere in the county, region or across England as a whole
- Women both resident and/or working in Fenland earn at least 35% less than men, a greater disparity than seen across England and the greatest among the Cambridgeshire districts.

Generally low levels of prosperity and low resident satisfaction

- Average weekly pay (£407) of residents is significantly lower than the regional and national average of £500 and fell (counter to local, regional and national trends) between 2007 and 2009
- One in three households in Fenland has an income below £20,000 (See map 1)
- The 2008 place survey recorded that 75% of Fenland residents were satisfied with their local area as a place to live, the lowest across Greater Cambridge, below the national average of 80% and lower than many of their 'statistical neighbours'.

Figure 11: Map of International Labour Organisation unemployment rates, East of England, 2006/07



Source: East of England RSS Review Integrated Sustainability Appraisal Scoping Report Topic Paper 5 - Economy and Employment.

Skills Levels, Education and Skills Demand (from the Cambridgeshire Local Economic Assessment)

Basic and intermediate level skills are poor and inequalities with the south are increasing.

- Nearly 14% of the working age population have no qualifications, nearly twice the proportion across Cambridgeshire as a whole and 2% higher than seen nationally.
- The proportions qualified to NVQ levels 2 and 3 (GCSE and A level) are at least 10% lower than the national average.
- The proportion of residents qualified to NVQ level 2 has remained fairly stable since 2001, contrasting with a steady decrease in the south and west of the county, suggesting that skills inequalities across the county may be increasing

Very few residents are qualified to degree level or above.

- NVQ level 4 plus is generally recognised as the skill level required to drive innovation and leadership within the economy and to enable businesses to compete globally
- 16% of residents, almost half the national proportion, are qualified to NVQ level 4 or above.
- Fenland ranks 14th lowest of all local authorities in the country, while Cambridge City ranks 5th highest.
- 2005/06 LSC figures showed Fenland to have the third lowest percentage of learners (8%) in the region entering Higher Education.

Low attainment and attendance levels of young people in education

- The proportion of 16 to 19 year olds that are Not in Education Employment and Training is highest in Fenland (8%) and Cambridge City (7%).
- Of those in education, the proportion of 15 year olds studying in Fenland reaching Level 2 or Level 3 (A level) by age 19 is significantly below average.
- 12 out of 54 of Fenland's lower super output areas (about 20% of Fenland geographic area) are among the most deprived national 20% in terms of education, skills and training. (See map 2)
- Fenland's cohort of young people who were 19 in 2007 was ranked forty-eighth out of forty-eight districts in the East of England for the percentage that had achieved Level 2 by the age of 16. By the time they were 19, Fenland's ranking had improved one place to forty-seventh.
- In terms of the other districts making up the Greater Cambridge sub-region, Forest Heath has similarly low skill and educational attainment levels among its residents.

Low accessibility of education

- Accessibility data collected by the DfT suggests that ease of access to both secondary and further education is lowest in East Cambridgeshire, Fenland, South Cambridgeshire and Forest Heath.
- The rural nature of the district is a significant barrier to individuals of low income accessing available training and employment.
- GCSE attainment figures suggest that Fenland pupils opting to schools in other districts tend to do better than those attending Fenland schools.
- Most of the out-commuting for learning seems to be to counties to the north of Cambridgeshire, suggesting movement out from Fenland. It is currently unclear whether young people that travel out of an area to study are more likely to drop out than people that do not.

Evidence of Skills Shortages in Managerial, Professional and Skilled workers.

[from Fenland 2009 Business Survey (225 responses)]

- 30% of respondents experienced difficulty in recruiting skilled manual workers
- Many respondents also encountered problems in recruiting managerial, professional, clerical and semi-skilled workers

Education

(Source: Annual demographic and socio-economic information report, March 2010, produced by: Cambridgeshire County Council Research Group)

Key Stage 2 Results

Tasks and tests in English, Maths and Science are taken at the end of Key Stage 2 by pupils aged 11+. The expected level of performance is Level 4. Performance in the Key Stage 2 tests varies across Cambridgeshire. Over the last five years the trend has been for schools in Fenland to score below the County average in all three subjects.

GCSE performance

GCSE performance varies across Cambridgeshire. In recent years the trend has been for schools in South and East Cambridgeshire to achieve scores above the County average, and those in Fenland and parts of Cambridge City to achieve below average scores. Since 2004 the percentage of pupils gaining 5+ A*-C grades in Fenland has steadily increased, from 36.2% in 2004 to 52.7% in 2008.

Key stage 3

Key stage 3 results are no longer published.

Annual data on school leavers' destinations

In 2009 there were 884 Year 11 school leavers from mainstream schools in Fenland. Of these, around 88% remained in full time education. Although this is higher than last year it is still the lowest level in the County. There was some variation in the percentage of pupils that remained in full time education according to the secondary school they had attended. The highest rates were from Cromwell and Sir Harry Smith (91%) and the lowest from Thomas Clarkson College (84%).

4% of all Fenland school leavers were in full time training, while 3.6% were in full time employment (see Table 16). The most popular occupations were the Entry to Employment (E2E) scheme (31%) and construction (26%) for males, and catering (28%) and E2E (24%) for females (see Figures 14 and 15 below). At a County level the most popular occupations were: construction (19%) and E2E (13%) for males, and hairdressing (31%) and catering (19%) for females. 2.4% of leavers were not in education, employment or training (NEET) but were actively seeking one of the three. This was the second highest level in the County. 2.4% have either moved, their status was unknown, or they were involved in other activities such as voluntary or part time work.

Local Business Activity

Information presented in the Fenland Annual demographic and socio-economic information report (see table 7), prepared by the Cambridgeshire County Council Research Group in March 2010 shows that in 2009 there were 3,790 local units in VAT and/or PAYE based enterprises in Fenland. Analysis by distribution shows that construction is the largest single sector for businesses, accounting for 16% of all local units. Analysis by size shows that 85% of businesses employed fewer than 10 people, and 97% employed fewer than 50.

Table 7: Number of Local Units in Fenland by Size and Sector in 2009

Employment Size	Local Units
0 – 4	2,715
5 – 9	510
10 – 19	275
20 – 49	180
50 – 99	70
100 – 249	20
250 – 499	20
500 – 999	0
1,000 +	0
TOTAL	3,790
Industry Sector	Local Units
Agriculture, forestry & fishing	450
Production	290
Construction	615
Motor trades	175
Wholesale	210
Retail	385
Transport & storage (inc. postal)	205
Accommodation & food services	210
Information & communication	130
Finance & insurance	65
Property	85
Professional, scientific & technical	270
Business administration and support services	235
Public administration and defence	30
Education	75
Health	160
Arts, entertainment, recreation and other services	200
TOTAL	3,790

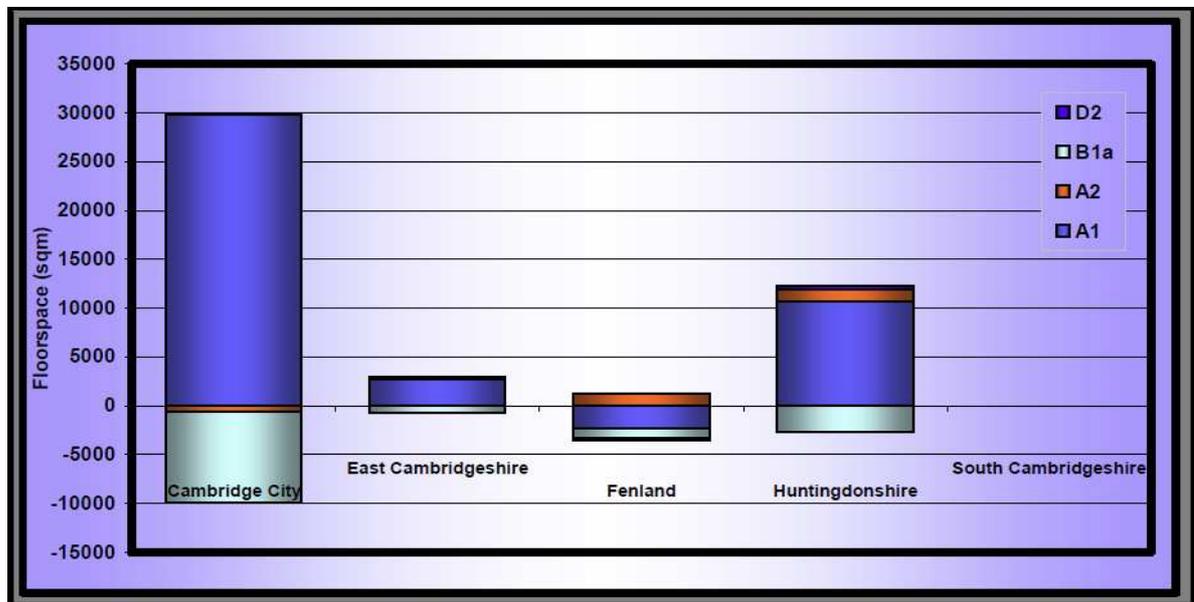
Retail Development

This section provides a commentary on the progress of retail and town centre development in Fenland, which is based on data that was collected with a nominal survey date of 31 March 2009 and prepared by the Research and Monitoring team at Cambridgeshire County Council.

Town centres in all districts have seen small reductions in office space. Town centres in East Cambridgeshire and Huntingdonshire have also seen a moderate increase in

retail floor space. However, in Fenland there has been an overall reduction (see figure 12).

Figure 12: Net Completions within Town Centres between 1999 and 2009) (D2 Assembly and leisure; B1a Offices; A2 Financial and professional services; A1 Shops)



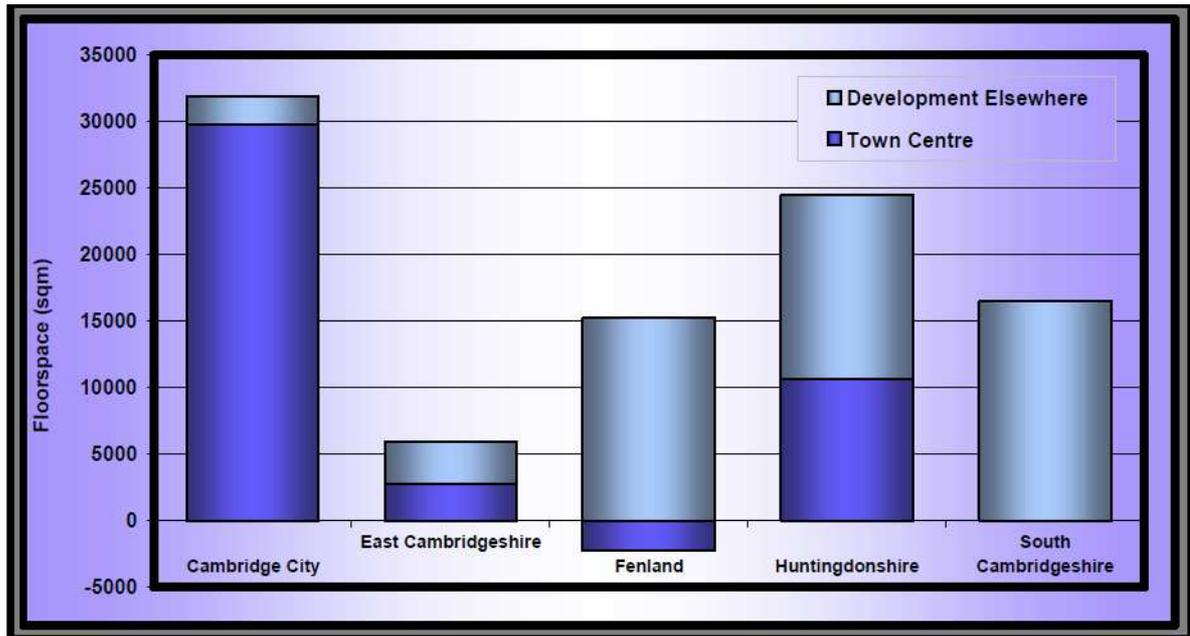
Source:

<http://www.cambridgeshire.gov.uk/environment/planning/policies/monitoring/Retail+development.htm>

Data for the period 01/04/2009 - 31/03/2010, shows that there have been no losses or gains in D2 floorspace. There has been an overall loss of A1 and B1a floorspace (-2,676 sq.m net tradable floor space and -976 sq.m gross floor space respectively). There has been a gain in A2 gross floorspace of 1,921 sq.m

All net additional retail floor space in Fenland was completed outside town centre areas (see figure 13 below). In Fenland, the out of town Retail Park at Wisbech accounts for much of the additional retail floor space. Data from Cambridgeshire County Council's Research & Monitoring Team, for the period 01/04/2009 - 31/03/2010, shows that this is a continuing trend.

Figure 13: Proportion of Net Addition Retail within Town Centres (1999 - 2009)



Source:

<http://www.cambridgeshire.gov.uk/environment/planning/policies/monitoring/Retail+development.htm>

Retail Commitments

Commitments are planned developments where construction has not been finalised, and include sites with planning permission and land allocated within District Council's planning documents. There is a large scale retail commitment in Fenland (an extant planning permission) for nearly 8,000 sq.m at Wisbech Stadium for non-food retail units as part of a larger cinema and A3 development.

10.3 What are the issues that should be a particular focus of the appraisal?

- There is a need to support the continued growth and diversification of the 'knowledge economy' and support the creation of higher-level added, higher paid jobs
- There are poor overall skills, education and qualification attainment levels in comparison to the national average
- Build prosperous communities by improving the economic performance of the District
- There is little to no night time economy
- There are no quality hotels
- There is a poor tourism base
- There is an over-reliance on Distribution for future employment provision – See latest CCC Monitoring figures
- The Districts workforce skills base; and, general educational achievement is low
- Out-commuting pulls too many people out of the District to other areas for work – 40 % of Fenland's working population
- Tackling out of centre retail development

10.4 Objectives

From an analysis of the policy context, the baseline data and the resulting key issues, we have developed the following objectives relating to Economic Activity:

- Help people gain access to a range of employment and training opportunities
- Support investment in people, places, communications and other infrastructure to improve the efficiency, competitiveness, vitality and adaptability of the local economy

Decision making criteria relating to these objectives are presented in the sustainability appraisal framework in chapter 11.

11. SUSTAINABILITY APPRAISAL FRAMEWORK

We have review of other plans, programmes and objectives and collected baseline data for each topic area. This has identified a number of social, environmental and economic issues that we have used to develop sustainability appraisal objectives and indicators. This framework will be used to appraise our development plan documents including all reasonable alternatives.

The sustainability objectives will be used as tests of sustainability or prompts for questions about sustainability and can be used to compare the effects of policy options. We have tried to make the objectives measureable and linked to indicators, which will help us to monitor the significant effects of LDF Development Plan Documents.

11.1 Land and Water Resources

Sustainability appraisal objectives	Decision Making Criteria	Indicators
1.1 Minimise the irreversible loss of undeveloped land	<ul style="list-style-type: none"> ▪ Will it use land that has been previously developed? ▪ Will it use land efficiently? ▪ Will it protect and enhance the best and most versatile agricultural land? ▪ Will it protect known mineral resources? 	<p>% of development on brownfield land.</p> <p>% loss of Grade 1, 2 or 3a land as defined by the Agricultural Land Classification.</p>
1.2 Increase water efficiency and limit water consumption to levels supportable by natural processes and storage systems	<ul style="list-style-type: none"> ▪ Will it increase water efficiency? ▪ Will it limit water consumption to levels supportable by natural processes and storage systems? ▪ Will it encourage the use of grey water recycling/rain water recycling in new developments? 	<p>Rates of potable water consumption for all purposes (daily litres/household or business consumption).</p> <p>Total water abstractions (litres/day) and abstraction applications agreed/rejected by the Environment Agency.</p>
1.3. Avoid any deterioration of river water quality.	<ul style="list-style-type: none"> ▪ Will development consider and address the potential detriment in water quality that it could cause? ▪ Will sustainable development and appropriate means of foul water drainage be promoted? 	<p>Water Quality monitoring and reporting undertaken by the Environment Agency</p>

11.2 Biodiversity

Sustainability appraisal objectives	Decision Making Criteria	Indicators
2.1 Avoid damage to designated sites and protected species	<ul style="list-style-type: none"> ▪ Will it safeguard protected species? ▪ Will it protect sites designated for nature conservation interest? ▪ Will it help meet Fenland District Council's duty to conserve biodiversity (including Natural England's Habitats and Species of Principal Importance)? 	<p>% of nationally designated sites in 'favourable' or 'unfavourable recovering' condition.</p> <p>% of locally designated sites in 'favourable' or 'unfavourable recovering' condition.</p>
2.2 Maintain and enhance the geographical range, amount and viability of habitats and species	<ul style="list-style-type: none"> ▪ Will it conserve and enhance the range of habitats and species? ▪ Will it maintain and enhance the viability of habitats and species? ▪ In relation to biodiversity adaption and climate change, will the ecological resilience and variety of landscape be protected and enhanced including provision of adaption measures to protect biodiversity from climate change? ▪ Will it help achieve Biodiversity Action Plan targets? 	<p>% of new developments involving protected species mitigation schemes.</p> <p>% of new developments including biodiversity enhancements that would benefit species / habitats of principal importance for conserving biodiversity. (In order to demonstrate that Fenland District Council is having regard for biodiversity during planning application process [NERC Act 2006])</p> <p>Change in areas of populations of biodiversity importance:</p> <p>1) Change in priority habitats</p> <p>2) Change in areas designated for their intrinsic value inc sites of international, national, regional, sub regional or local significance</p>

11.3 Landscape and Cultural Heritage

Sustainability appraisal objectives	Decision Making Criteria	Indicators
3.1 Preserve and where appropriate, enhance buildings, monuments, sites, areas and landscapes that are designated or locally valued for their heritage interest; and protect/enhance their settings.	<ul style="list-style-type: none"> ▪ Will it protect sites, features of areas of historical, archaeological, or cultural interest (heritage assets including conservation areas, listed buildings, registered parks and gardens, scheduled monuments, undesignated archaeological sites and heritage at risk)? ▪ Will it enhance sites, features of areas of historical, archaeological, or cultural interest (heritage assets including conservation areas, listed buildings, registered parks and gardens, scheduled monuments, undesignated archaeological sites and heritage at risk)? ▪ Will it re-use/adapt buildings considered to be of architectural or historic interest where appropriate? 	<p>% of Heritage at Risk (every type of designated heritage asset including conservation areas and scheduled monuments; and undesignated archaeological sites) (English Heritage)</p> <p>The percentage of conservation areas with up-to-date (e.g. within the last 5 years) appraisals and management plans.</p>
3.2 Create places, spaces and buildings that are well designed, contribute to a high quality public realm and maintain and enhance diversity and local distinctiveness of townscape character.	<ul style="list-style-type: none"> ▪ Will it maintain and enhance the diversity of townscape character? ▪ Will it maintain and enhance the local distinctiveness of townscape character? ▪ Will it maintain and enhance the character of settlements? ▪ Will it lead to developments built to a high standard of design and good place making? 	Feedback from Fenland Community Fairs and other questionnaires that may be undertaken by the Council.
3.3 Retain the distinctive character of Fenland's landscape.	<ul style="list-style-type: none"> ▪ Will it maintain and enhance the diversity of landscape character? ▪ Will it conserve and enhance landscape character and quality ▪ Will it maintain and enhance the distinctiveness of landscape character? 	Assessment against the landscape character assessment

11.4 Climate Change and Flood risk

Sustainability appraisal objectives	Decision Making Criteria	Indicators
<p>4.1 Increase use of renewable energy sources whilst minimising waste and the use of other energy resources</p>	<ul style="list-style-type: none"> ▪ Will it encourage energy efficient, low carbon building design? ▪ Will it reduce energy consumption through energy efficient systems within the building design? ▪ Will it lead to an increased proportion of energy needs being met from renewable sources? ▪ Will it avoid further contribution to green house gas emissions? ▪ Will it reduce domestic and non-domestic waste? ▪ Will it increase waste recovery and recycling? ▪ Will it take into account local opportunities for the provision of energy, water, fuel and food? ▪ Does it encourage the the use of non-virgin materials (i.e. reuse, this encourages 'closing the loop on the material use system') ▪ Will it reduce use of highly polluting materials? 	<p>KWh of non-renewable energy usage.</p> <p>KWh of renewable energy usage.</p> <p>% of household waste which have been sent for recycling (District and County monitoring, BVPI)</p> <p>CO2/methane emissions</p> <p>% of new development meeting Building Research Establishment Environmental Assessment Method (BREEAM) (non residential) and Eco-homes (residential) 'excellent' standard for energy efficiency or Level 5 in the Code for Sustainable Homes or equivalent standrands.</p> <p>Renewable energy capacity installed by type (GW/h)</p>
<p>4.2 Limit or reduce vulnerability to the effects of climate change</p>	<ul style="list-style-type: none"> ▪ Will it minimise risk to people and property from events such as storm or subsidence? ▪ Will it improve the adaptability of people and property to changing temperatures? 	<p>% of new development meeting Building Research Establishment Environmental Assessment Method (BREEAM) (non residential) and Eco-homes (residential) 'excellent' standard for energy efficiency or Level 5 in the Code for Sustainable Homes or equivalent standards.</p>
<p>4.3 Minimise vulnerability of people, places and</p>	<ul style="list-style-type: none"> ▪ Will it minimise risk to people and property from current and 	<p>Number of planning permissions granted</p>

Sustainability appraisal objectives	Decision Making Criteria	Indicators
property to the risk of flooding from all sources	<p>future flooding?</p> <ul style="list-style-type: none"> ▪ Will it allow for mitigation against future flood risk from all sources (tidal events and sea level rise; fluvial and increased river flows; storm events; surface water) ▪ Will it promote incorporation of Sustainable Urban Drainage Systems in new developments to minimise run-off/overland flow? 	<p>contrary to advice of Environment Agency on either flood defence grounds or water quality</p> <p>Number of new developments incorporating grey water recycling technology and/or Sustainable Drainage Systems (SUDS)</p>

11.5 Pollution

Sustainability appraisal objectives	Decision Making Criteria	Indicators
5.1 Reduce emissions of greenhouse gasses and other pollutants (including air, water, soil, noise, vibration and light)	<ul style="list-style-type: none"> ▪ Will it reduce emissions of greenhouse gases? ▪ Will it improve air quality? ▪ Will it reduce traffic volumes? ▪ Will it support travel by means other than the car? ▪ Will it reduce levels of noise or noise concerns? ▪ Will it reduce or minimise light pollution? ▪ Will it reduce diffuse and point source water pollution? ▪ Will it improve water quality in the District's rivers and drains? ▪ Will it provide sustainable modes of travel e.g. walking and cycling? 	<p>Change in levels of carbon dioxide.</p> <p>Change in the number of sources of pollution.</p> <p>Changes in traffic levels and flows.</p> <p>Changes in NO₂, SO₂ and PM₁₀ as these are the 3 pollutants for which Air Quality Management Areas have been designated.</p> <p>Environment Agency data on change in water quality of rivers and drains</p> <p>Change in levels of noise, light or odour pollution affecting areas sensitive to pollution.</p> <p>Amount of new residential development</p>

Sustainability appraisal objectives	Decision Making Criteria	Indicators
		within 30 minutes public transport time of GP, hospital, primary and secondary school, areas of employment and a major retail centre.
5.2. Reduce the risk of pollution to the environment from contaminated land.	<ul style="list-style-type: none"> ▪ Does it promote the remediation of contaminated land? 	<p>% of contaminated land remediated? / No of contaminated sites (from your authority's list of contaminated sites.)</p> <p>Number of planning applications granted contrary to advice of Environment Agency on the grounds of unacceptable risk to the water environment.</p>

11.6 Healthy, Inclusive and Accessible Communities

Sustainability appraisal objectives	Decision Making Criteria	Indicators
6.1 Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities and community activities); and ensure all groups thrive in safe environments and decent, affordable homes	<ul style="list-style-type: none"> ▪ Will it help to improve life expectancy? ▪ Will it encourage healthy lifestyles? ▪ Will it reduce actual levels of crime? ▪ Will it reduce fear of crime? ▪ Will it improve retention and provision of key local services and facilities, including health, education and leisure (village shops, post offices, pubs etc)? ▪ Will it improve access to key local services and facilities, including health, education and leisure (village shops, post offices, pubs etc)? ▪ Will it support and improve community and public transport and safe routes for walking and cycling? 	<p>Affordable housing completions</p> <p>% of affordable homes as proportion of new dwelling completions</p> <p>Number in housing need from SHMA and surveys</p> <p>Number and % of homes falling below Decent Homes Standard /declared non decent.</p> <p>The number of pitches and plots delivered by type and tenure in comparison to the level of need identified through the Gypsy and Traveller Accommodation</p>

Sustainability appraisal objectives	Decision Making Criteria	Indicators
	<ul style="list-style-type: none"> ▪ Will it support the provision of a range of housing types and sizes, including affordable and key worker housing, to meet the identified needs of all sectors of the community? ▪ Will it reduce the number of unfit homes? ▪ Will it meet the needs of the travelling community? ▪ Will it encourage new community activities and engagement in existing community activities? ▪ Will it improve access to a wider range of cultural activities? 	Assessment.
6.2 Create and enhance multifunctional open space that is accessible, links with a high quality green infrastructure network and improves opportunities for people to access and appreciate wildlife and wild places	<ul style="list-style-type: none"> ▪ Will it increase the quantity and quality of publicly accessible open space? ▪ Will it promote links with a high quality and accessible green infrastructure network and existing public rights of way? ▪ Will it provide sustainable modes of travel e.g. walking and cycling? ▪ Will it improve access to wildlife and wild places and promote their quiet enjoyment? ▪ Will it promote understanding and appreciation of wildlife? 	<p>Amount of new open space created.</p> <p>Natural England's Accessible Natural Greenspace Standards (ANGSt).</p> <p>Local transport data</p>
6.3 Redress inequalities related to age, gender, disability, race, faith, location and income	<ul style="list-style-type: none"> ▪ Will it encompass people from all different backgrounds, social groups and locations? ▪ Will it encourage communities to function and grow in harmony together? ▪ Will it reduce poverty? ▪ Will it reduce social exclusion? ▪ Will it promote diversity? ▪ Will it promote inclusion? ▪ Will it promote pride in the community? ▪ Will it reduce the inequality in educational attainment? 	Feedback from Fenland Community Fairs and other questionnaires that may be undertaken by the Council.

11.7 Economic Activity

Sustainability appraisal objectives	Decision Making Criteria	Indicators
7.1 Help people gain access to a range of employment and training opportunities	<ul style="list-style-type: none"> ▪ Will it provide training and education opportunities for people of all ages, skills and abilities? ▪ Will it support provision of skilled employees to the economy? ▪ Will it support the growth of a range of sustainable employment sectors? ▪ Will it provide opportunities for local people to work in Fenland? ▪ Will it improve access to employment by means other than the car? ▪ Will it improve educational attainment?' 	Results from the Cambridgeshire County Council Research Group reports (e.g. The Fenland Annual demographic and socio-economic report) and Fenland's Annual Monitoring Report.
7.2 Support investment in people, places, communications and other infrastructure to improve the efficiency, competitiveness, vitality and adaptability of the local economy	<ul style="list-style-type: none"> ▪ Will it encourage businesses development? ▪ Will it encourage aspiration and create opportunities? ▪ Will it improve the level of investment in key community services and infrastructure? ▪ Will it support provision of key communications infrastructure, including broadband? ▪ Will it improve business development and enhance competitiveness? ▪ Will it enable opportunities to encourage growth in tourism? ▪ Will it support the vitality and viability of market town centres? ▪ Will it support the rural economy? ▪ Will it improve skills? 	Results from the Cambridgeshire County Council Research Group reports.

12. THE NEXT STEPS

The next steps of Sustainability Appraisal are:

- testing the development plan document objectives against the sustainability appraisal objectives using a compatibility matrix
- developing and refining the options for the development plan document
- predicting and appraising the significant effects of the options using a simple methodology that is developed alongside the Shaping Fenland Sustainability Assessment methodology. In assessing the policy options, we will monitor possible conflicts between the objectives and refine where necessary.
- considering ways of mitigating adverse effects and maximising beneficial impacts
- proposing measures to monitor the significant effects of implementing the development plan document

The sustainability appraisal will be undertaken in parallel with development of options to ensure that any adverse effects of proposals are identified as early as possible. These can then be addressed by modifying the proposals, developing mitigation measures, or considering entirely different options. Options which are not taken forward can be dropped from consideration as the plan progresses.

We will work with the Environment Agency, English Heritage, Natural England, the public and stakeholders in identifying and refining options. This will help to ensure that options that could be considered 'reasonable alternatives' are satisfactorily defined and covered in the sustainability appraisal.

We are required to assess the likely significant effects of the plan, not all possible effects. We will take into account the following principles:

- significance has to be determined individually in each case - effects which are significant in one situation are not necessarily significant in another
- analysis of significance needs to be proportionate to the expected severity of the effect
- flexibility is important - criteria should be used as guidelines, not rules
- mathematical models are sometimes difficult to use to determine significance - inappropriate use of numeric models could give rise to fictitious precision and attempts to quantify qualitative and semi-qualitative aspects is unlikely to lead to an increase in objectivity.

We will provide conclusions on the overall sustainability of the different options, including those selected for the draft development plan documents. Any assumptions we use in making judgements on the significance of effects of the development plan document will be documented. It will be important to highlight any potential inconsistencies between the objectives of the development plan document and its policies, as well as making amendments, where possible, to reduce conflicts.

Appendix A

ACRONYMS AND KEY TERMS

The following acronyms and key terms are used throughout the document:

DEFRA	Department for Environment, Food and Rural Affairs
DECC	Department of Energy and Climate Change
EEDA	East of England Development Agency
EERA	East of England Regional Assembly
LDF	Local Development Framework
RSS	Regional Spatial Strategy
SA	Sustainability Appraisal
SEA	Strategic Environmental Assessment

The following key terms are used in the document:

Biodiversity - all species of life on earth including plants and animals and the ecosystem of which we are all part.

Biofuel - Biofuel defined broadly is solid, liquid, or gas fuel consisting of, or derived from, biomass. Biofuel is considered an important means of reducing greenhouse gas emissions and increasing energy security by providing a viable alternative to fossil fuels.

Biomass - Biomass is recently living organisms or their metabolic by-products – such as cow dung. It is a renewable energy source based on the carbon cycle, unlike other natural resources such as petroleum, coal and nuclear fuels

Brownfield Land (also known as Previously Developed Land) - land which is or was occupied by a permanent structure, including the curtilage of the developed land (but excludes private residential gardens) and any associated fixed surface infrastructure. Development of such land is preferable to development of greenfield land under the sequential approach.

Climate Change - Climate is the average weather experienced over a long period. This includes temperature, wind and rainfall patterns. The Earth's climate is not fixed, and in the past has changed many times in response to a variety of natural causes. However, the Earth's surface has warmed by about 0.754°C on average since around 1900 and by around 0.4°C since the 1970s.

Climate change adaptation - Measures to adapt to the future impacts of changing weather associated with climate change, eg flood defences

Climate change mitigation - Measures to reduce the rate at which greenhouse gasses are emitted into the atmosphere, thereby reducing the effects of climate change

Conservation Area - an area of special historic or architectural interest where character must be preserved or enhanced.

Core Strategy - a Development Plan Document (DPD) which contains the spatial vision, main objectives and policies for managing the future development of the area.

Development Plan - see Statutory Development Plan.

Development Plan Document (DPD) - one of the types of LDD; they set out the spatial planning strategy, policies and/or allocations of land for types of development across the whole, or specific parts, of the LPA's area.

Environmental Impact Assessment (EIA) - the process by which information will be collected about the environmental impact of a project. This is then taken into account by the local planning authority when determining an application for planning permission.

Greenfield land - land which has not been developed before, other than for agriculture or forestry buildings or buildings associated with parks, recreation grounds and allotments.

Green Infrastructure - a network of protected sites, nature reserves, green spaces, waterways and greenway linkages (including parks, sports grounds, cemeteries, school grounds, allotments, commons, historic parks and gardens and woodland). It offers opportunities to provide for a number of functions, including recreation and wildlife as well as landscape enhancement.

Local Development Document (LDD) - any document, prepared in accordance with the statutory requirements, which sets out the LPA's policies, including supplementary policies and guidance, relating to the development and use of land in their area. All LDDs are part of the LDF. There are different types of LDD.

Local Development Framework (LDF) - the collective term for the whole package of planning documents which are produced by a local planning authority to provide the planning framework for its area. The LDF includes LDDs, the LDS and the AMR.

Mitigation measures - actions necessary to restrict or remedy the negative impacts of a particular development.

Open Space and Recreational Land - areas of undeveloped or largely undeveloped land for leisure purposes - including village greens, allotments, children's playgrounds, sports pitches and municipal parks.

Planning Policy Statement (PPS) - one of a series of Statements issued by the Government to set out national policies for different aspects of planning. Each Statement (dealing with a particular aspect of planning) has its own PPS number. PPSs are sometimes accompanied by Companion Guides which offer more detailed guidance on the operation of national policy.

Previously Developed Land (PDL) - see Brownfield Land.

Regional Spatial Strategy (RSS) - a document published by the Secretary of State for Communities and Local Government, providing statutory planning policies for a region. In the East of England region the RSS is known as the East of England Plan. The RSS is part of the statutory Development Plan for an area.

Renewable energy - Renewable energy flows involve natural phenomena such as sunlight, wind, tides and geothermal heat, as the International Energy Agency explains: 'Renewable energy is derived from natural processes that are replenished constantly. In its various forms, it derives directly from the sun, or from heat generated deep within the earth. Included in the definition are electricity and heat generated from solar, wind, ocean, hydropower, biomass, geothermal resources, and biofuels and hydrogen derived from renewable resources'

Spatial Planning - this concept brings together policies for the development and use of land with other policies and strategies which too have ramifications for the nature of places and how they operate.

Statutory Development Plan - the overall term for a number of documents which, together, have a particular status under the planning legislation in decision-making. The Development Plan includes the Regional Spatial Strategy and all adopted DPDs for the area. For an interim period it may include all or part of certain structure plans and local plans.

Supplementary Planning Document (SPD) - one of the types of LDD; they expand on policies or provide further detail to policies contained in a DPD.

Sustainability Appraisal (SA) - a formal, systematic process to assess the environmental, economic and social effects of strategies and policies in a Local Development Document from the start of preparation onwards. The process includes the production of reports to explain the outcomes of the appraisal.

Sustainable Community Strategy - a document which plans for the future of Fenland across a wide range of topics, setting out a vision and a series of aspirations. The local strategic partnership has responsibility for producing the document which sets out the main priorities that all partners work towards. It does not form part of the LDF.

Sustainable Development - usually referred to as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

Sustainable Transport - can be any form of transport other than the private car. Generally, the term most commonly relates to travel by bus, train or light rail, but walking and cycling are sustainable means of transport as well.

The Act - the Planning and Compulsory Purchase Act 2004, which put in place the statutory framework for preparing the Local Development Framework.

The Regulations - the Town and Country Planning (Local Development) (England) Regulations 2004, as amended by the Town and Country Planning (Local Development) (England) (Amendment) Regulations 2008 and the Town and Country

Planning (Local Development) (England) (Amendment) Regulations 2009; and the Town and Country Planning (Transitional Arrangements) Regulations 2004.