

**Yorkshire and Humber  
Regional Spatial Strategy  
and Climate Change Study**

**RESEARCH REPORT**

**Prepared for  
Yorkshire and Humber  
Regional Assembly  
by  
Land Use Consultants  
in association with  
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# I. INTRODUCTION AND STUDY OBJECTIVES

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## INTRODUCTION

- 1.1. Land Use Consultants and Cobbetts<sup>1</sup> were commissioned by the Yorkshire and Humber Assembly to undertake a study of the Yorkshire and Humber Regional Spatial Strategy (RSS) and climate change. The research was carried out between mid July and early September 2005.
- 1.2. This Research Report provides a detailed record of the study objectives, methodology and research findings, followed by the conclusions and recommendations of the study team. It is accompanied by a separate volume of Appendices which provide a record of the evidence on which the research findings and recommendations are based. A separate Summary Report is also available.

## BACKGROUND

### Context – the need for the study

- 1.3. The Government has set a national target for a reduction in CO<sub>2</sub> emissions from 1990 levels of 20% by 2010 and 60% by 2050, and a national target for the proportion of energy generated from renewable sources of 10% by 2010<sup>2</sup>.
- 1.4. The Government also highlights the need to adapt now to the impacts that will occur as a result of climate change, through the work of the UK Climate Impacts Programme<sup>3</sup>.
- 1.5. In the Yorkshire and Humber region the main contributors to climate change have been identified<sup>4</sup> as the power generation industry (58% of CO<sub>2</sub> emissions in 2001), the transport sector (road transport: 13%, other transport excluding international aviation: 0.5%), and the domestic sector (10%). Other contributing sectors include industry, commerce, agriculture, waste, health and education, and construction.
- 1.6. Trends show that, during the period 1990 to 2001, greenhouse gas emissions declined in most sectors<sup>5</sup> in Yorkshire and Humber. The main exception was transport, the fastest growing source of emissions. Road transport experienced an increase of 17% over this period, despite more fuel efficient cars, a rise which is predicted to continue. The contribution of aviation to greenhouse gas emissions is

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<sup>1</sup> Wilbraham & Co is the Planning & Environmental Practice of Cobbetts.

<sup>2</sup> Energy White Paper – our energy future – creating a low carbon economy. DTI, 2003; Securing the future: Delivering the UK Sustainable Development Strategy, 2005.

<sup>3</sup> Measuring Progress. Preparing for climate change through the UK Climate Impacts Programme. UKCIP Technical Report, 2005.

<sup>4</sup> Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Cambridge Econometrics (2002), and Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Update of Baseline Data, Cambridge Econometrics (2003).

<sup>5</sup> Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Cambridge Econometrics (2002), and Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Update of Baseline Data, Cambridge Econometrics (2003).

also increasing rapidly. The decline in greenhouse gas emissions in other sectors can be put down to a re-structuring of the economy from manufacturing to office-based commerce, cleaner and more efficient technologies, and a switch in energy generation from coal to gas.

- 1.7. A considerable proportion of the power generation was to provide energy to other regions (the region supplies 18% of the UK's electricity), and so somewhat distorts the figures for Yorkshire and Humber. However, emissions in the power generating and domestic sectors were also predicted to rise again towards 2010. Reducing the region's contribution to greenhouse gas emissions is therefore a key challenge.
- 1.8. The impacts of climate change in Yorkshire and Humber are likely to be wide-ranging and include increased temperatures, rising sea levels and coastal erosion, increased flooding, pressure on water resources, changing agricultural landscapes, habitats and species distribution, and impacts on property, industry and infrastructure from effects such as increased subsidence, and risk of storm damage<sup>6</sup>. In many cases these impacts will be concentrated in particular locations, such as the heat island effect of higher summer temperatures in cities such as Leeds, Hull and York, increased flood risk along the Humber Estuary, in the Vale of York, and in the urban areas of Leeds, Bradford and Sheffield, water shortages for areas relying on the Lower Derwent and the Doncaster/Selby sandstone aquifer, and coastal habitats affected by the loss of land known as 'coastal squeeze' due to sea level rise.
- 1.9. Possible adaptation measures to address the impacts of climate change include locating and designing development to take account of flood risk, water conservation measures, sustainable drainage and better resilience of buildings and infrastructure to cope with flood risk, higher temperatures and storm damage<sup>7</sup>.
- 1.10. Further details of the regional picture in relation to climate change can be found at **Section 3** (p.17).
- 1.11. The current RSS addresses the need for both climate change mitigation and adaptation<sup>8</sup> in a twin-tracked approach through a strategic cross-cutting policy (S5), which requires that development plans must include policies to help the region meet its emissions reduction targets (in line with the national target above), and to plan for the land use implications of climate change impacts. This is complemented by a further strategic policy on sustainable resource use, which includes the promotion of energy efficiency and renewable energy (S6), and topic based policies to address climate change impacts, such as those relating to increased flood risk and water

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<sup>6</sup> Warming up the region; the impacts of climate change in the Yorkshire and Humber region. WS Atkins, Stockholm Environment Institute, The Met Office (2002).

<sup>7</sup> The planning response to climate change, ODPM, 2004; Climate change and local authorities: how prepared are you? An adaptation guide for local authorities in the UK, UK Climate Impacts Programme (UKCIP), 2003.

<sup>8</sup> Throughout this report, 'mitigation' refers to reducing the region's greenhouse gas emissions, which contribute to climate change. 'Adaptation' refers to measures that need to be taken to respond to the impacts of climate change, such as increased risk of flooding and reduced availability of water resources. 'Resilience to climate change impacts' refers to being able to cope with or recover from the effects of climate change impacts – whether this relates to flooding, increased temperatures, water shortages etc. – and will depend on local characteristics as well as the adaptation measures implemented, among other things.

resource shortages. Details of the current approach can be found at **Section 6** (p.45).

- I.12. There are strongly held views within the region that the RSS should be doing more than it is at present to help reduce the region's contributions to the causes of climate change. Conversely, there are also views that following this route could go beyond the statutory limits of the RSS and could have damaging consequences for the economy of the region, the policy focus of which is regeneration.
- I.13. The YHA therefore commissioned this research to inform its decision making on the approach to follow in addressing climate change in the emerging Draft RSS.

### **Study Brief**

- I.14. The overall aim of this research was to understand what the **statutory limits** of the RSS are in terms of responding to climate change through mitigation and adaptation activities, and what the RSS should therefore address. In other words, the study aim was to consider what the RSS **can** consider in addressing climate change, and what it **should** consider, relative to other plans and strategies at the national, regional and local level. This will help to ensure that the emerging Draft RSS takes a forward looking, yet realistic approach to climate change.
- I.15. The specific objectives of the Study were to:
  - (i) Set out the statutory parameters of RSS in terms of what it can consider and contain, especially in terms of climate change.
  - (ii) Set out what national policy and legislation (including Building Regulations) provide for in terms of climate change, and to suggest what RSS policy should reasonably be expected to provide for.
  - (iii) Identify areas of Government legislation, policy or guidance that act as major barriers or obstacles to the region's climate change aspirations (i.e. its regional targets for carbon equivalent reductions).
  - (iv) Consider the presentation, implementation and monitoring of climate change related policies in RSS, Local Development Frameworks (LDFs) and Local Transport Plans (LTPs).
- I.16. In addition, and as set out in the Study Brief, the research considered:
  - How RSS policies should be reflected in LDFs and LTPs and whether from the available evidence (eg. annual monitoring reports) this is happening.
  - Whether responsibilities for implementation of policies in RSS are sufficiently clear.
  - Whether the potential contribution of specific sectors to the achievement of climate change targets is sufficiently clear.

- What mechanisms need to be put in place to monitor progress against policies in RSS that have an impact on climate change mitigation or adaptation issues, and what gaps currently exist in data availability.
- The emerging messages from the review of the UK Climate Change Programme.
- The approach of other regions.
- Existing studies / evidence on the potential opportunity costs to the regional economy of the types of measures associated with regional policy encouraging / prescribing higher climate change related specifications in the RSS (e.g. through greater energy efficiency, more embedded energy generation, renewable energy generation).

### **Approach and Methodology**

- 1.17. The study team used the following research methods to meet the objectives set, explained in detail at **Section 2** (p.7):
- Review of legislation, policies and strategies relevant to planning and climate change at the national and regional level.
  - Review of the current RSS for Yorkshire and the Humber, along with the emerging approach to the new RSS.
  - Review of the approach of two other regions to climate change in their RSS.
  - Consultation with regional stakeholders and a sample of local authorities, to seek their views on what RSS should address in relation to climate change.
- 1.18. Two important issues run through the research. Firstly, the role of RSS goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they function.
- 1.19. The study therefore considers both the traditional aspects of land use planning and the wider role of RSS and the implications of this remit for setting statutory requirements and the provision of an integrated vision to influence a range of other strategies and decision makers. Areas which the RSS may seek to influence in terms of climate change mitigation and adaptation, which would require implementation outside of the planning system might include the use of agricultural land for water storage, development of biomass crops as a source of renewable energy, measures to address coastal flood risk and issues of coastal squeeze, etc.
- 1.20. Secondly, while the RSS sets a spatial framework for the region, much of its vision will be articulated further and delivered at the local level. Therefore when considering what the RSS can require, it is important to be clear about how policies in the RSS will translate down to the LDF and LTP level, and whether and how they will be implemented. Delivery will be key.

## FOCUS OF THE RESEARCH

- 1.21. Regional Planning Guidance (RPG) for Yorkshire and the Humber (RPG12) was issued in October 2001. During 2002 and 2003 work was undertaken on a selective review of RPG. This was aimed at filling in 'gaps' in the original strategy and incorporating the results and recommendations of major studies completed since the original RPG was prepared. The Selective Review of Regional Planning Guidance for Yorkshire and Humber (RPG12) reached completion on the 1st December 2004 with the publication of the final document.
- 1.22. While the selective review of RPG was underway the Government introduced proposals for reforms to speed up the planning system. Therefore the Selective Review of RPG is referred to as the 'current RSS', as it was published after the introduction of the Planning and Compulsory Purchase Act 2004.
- 1.23. Work is now underway to produce a revised RSS, which will replace the current RSS. The planned timetable is for the Assembly to submit a draft RSS to the Government in mid December 2005.
- 1.24. This study focused on the current RSS. It also makes reference where appropriate to the early stages of the draft emerging RSS, in particular the topic papers and early stages of the Sustainability Appraisal.

## STRUCTURE OF THE REPORT

- 1.25. Following this introductory chapter, the report is structured as follows:
  - **Section 2** sets out the study methodology.
  - **Section 3** provides the regional climate change context.
  - **Sections 4 to 7** describe the results of the research.
  - **Section 8** examines the gaps between what the RSS should do and what it is doing, and provides recommendations for the new RSS.
  - **Section 9** sets out the conclusions and recommendations.



## 2. METHODOLOGY

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- 2.1. The methodology for undertaking the research is set out under four stages below.

### **STAGE 1: REVIEW OF Y&H RPG/DRAFT RSS POLICIES**

#### **Review of RSS policies**

- 2.2. To set the context, the first stage of the work was to review how current RSS policies address climate change. This included specific climate change policies, and, since climate change is a cross-cutting issue, those topic based policies which also make up part of the region's response to climate change, for example policies on transport, energy, flood risk, water resources, etc.
- 2.3. The Topic Papers setting out the approach of the draft RSS were also reviewed.

#### **Responsibilities for implementation of RSS**

- 2.4. Alongside the review of RSS policies, consideration was given as to whether responsibilities for implementation of policies are defined in the RSS, and whether the potential contribution of specific sectors to the achievement of climate change targets (as set out in RSS) is sufficiently clear.

### **STAGE 2: WHAT COULD/SHOULD RSS SEEK TO ACHIEVE IN TERMS OF ADDRESSING CLIMATE CHANGE?**

#### **Consultation**

- 2.5. A targeted consultation of key regional stakeholders was carried out to ascertain their views on the approach to climate change policy in RSS. We focused on those organisations with responsibilities for implementation:
- Key contacts at the Yorkshire & Humber Assembly responsible for drafting elements of the RSS including the RTS.
  - Government Office.
  - Yorkshire Forward.
  - House Builders Federation.
  - Regional Climate Change Partnership.
  - Environment Agency.
  - English Nature.
  - Regional Environmental Forum (email only).
  - Friends of the Earth (email only).

### **Questions for Regional Stakeholders**

- 2.6. Questions were agreed with the Steering Group and are set out below. They were sent to consultees in advance as part of a Briefing Note which can be found at **Appendix I** of this report. This set out a summary of key climate change issues and impacts for the region and how the RSS addresses climate change, and included more detailed annexes. The feedback from stakeholders informs **Section 4** of the report.
1. Do you agree with the analysis of climate change as set out in the briefing note (see also Annex 1 and 2)?
  2. Have we identified the right locations affected (see also Annex 2)?
  3. Have we identified the right mechanisms to reduce and adapt to climate change (see also Annex 2)?
  4. Which other regional strategy is most relevant to be reviewed as part of the study (in addition to those reviewed as part of the Briefing Note)?
  5. Do you agree with the summary of RSS as it relates to climate change as being a reasonable summary (see also Annex 3)?
  6. Do you think policies within the current RSS (December 2004) go far enough to address climate change mitigation and adaptation (see Annex 3)? How could the approach be improved in Draft RSS?
  7. Is the breadth of topics within which climate change is addressed sufficient? If not what others should be included?
  8. Should more specific requirements be included, e.g.:
    - a) should the RSS require that new development must include a percentage of renewable energy generation as part of the development (e.g. micro-generation / embedded generation as a % of energy use as in LB Merton)?
    - b) should developments be required to meet more stringent standards than are included in the current Building Regulations, and / or in line with BREEAM / Ecohomes?
  9. Do you foresee any areas of climate change policy which might be desirable, but difficult to achieve through RSS?
  10. In your view, can the RSS policies on climate change be implemented? If not, which cannot, and why not?
  11. Are the responsibilities for delivery of RSS policies sufficiently clear, e.g. the contributions that different sectors can make to reducing emissions? If not, how should the approach be improved in the draft RSS?
  12. What mechanisms need to be put in place to adequately monitor progress against RSS policies with an impact on climate change mitigation and adaptation issues?
  13. What gaps currently exist in data availability in the region to enable effective monitoring of RSS policies?

## Review of legislation, policies and strategies

- 2.7. Much has already been done to identify the types of outcomes which the region should seek to achieve in terms of climate change. For example, the regional Climate Change Scoping Study *Warming Up the Region*, the draft Climate Change Action Plan, and the Sustainable Development Framework will have reviewed a wide range of research and developed approaches suited to the individual characteristics of the region. Therefore, rather than undertaking a detailed review of climate change research, the study focused on if and how the RSS can deliver the desired outcomes identified for the region.
- 2.8. By reviewing a range of national level legislation, policy and guidance, and work undertaken by two other regions we sought to identify:
- What can be **legally required** through RSS policies, as set out in legislation and policy.
  - How such requirements can be **implemented** e.g. at the local level through mechanisms such as planning conditions or agreements, or enforcement of Building Regulations.
  - Aspects of climate change mitigation and adaptation which cannot be directly delivered by the RSS, but which it can **encourage**, on the basis of national level policy and guidance.
  - How such aspects can then **realised** e.g. through influencing a range of other strategies e.g. Shoreline Management Plans, or at the local level through various means, e.g. supplementary planning documents and informatives linked to planning permissions.

## Legal review

- 2.9. Key primary and secondary legislation in relation to climate change was reviewed to establish the statutory parameters of RSS in terms of what it can and cannot consider and contain (see **Appendix 3**).
- 2.10. In particular the following matters were considered:
- The legal context for preparation of the RSS pursuant to the Planning & Compulsory Act 2004 ('PCPA 04').
  - The legal factors material to the inclusion of relevant policies which can be regarded as barriers or obstacles in the way of policy making (but which do not determine lawfulness).
  - The nature and scope of regimes other than that of Town & Country Planning as these may be used to pursue the promotion of adaptation or mitigation measures.
- 2.11. In addition, the following specific questions were addressed:
- Assuming that it would in principle be lawful to do so, should the emerging RSS impose tighter restrictions, or require the achievement of a higher standard, than

numeric limits or other expressed standards prescribed in a non planning legal regime (e.g. Building Regulations)?

- To what extent could, and should, the RSS require adherence to standards such as BREEAM or Eco-Homes in respect of the sustainability of new development?

2.12. The following legislation was reviewed:

- Planning and Compulsory Purchase Act 2004.
- Town and Country Planning Regulations 2004.
- Town and Country Planning (Initial Regional Spatial Strategy) (England) Regulations 2004.
- Town and Country Planning (Regional Planning Guidance in revision of the Regional Spatial Strategy) Order 2004.
- Town and Country Planning (Regions) (National Parks) (England) Order 2004.
- European Convention on Human Rights and Fundamental Freedoms as enshrined in domestic law by the Human Rights Act 1998.
- Strategic Environmental Assessment Directive (European Directive 2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment to Land Use and Spatial Plans in England.
- EC Directive 85/337/EC enshrined in Domestic Law in the Environmental Impact Assessment Regulations 1999 and sister Regulations.
- The Water Framework Directive 2000.
- Building Act 1984.
- Building Control Regulations 2000.

## **Policy review**

### ***National level***

2.13. A targeted review of Government policy and guidance was carried out to identify what RSS should and should not consider (see **Appendix 4**). This covered the following policy and strategy documents:

- PPS1 - Delivering Sustainable Development (2005).
- PPS11 - Regional Spatial Strategies (2004).
- PPG13 – Transport (2001).
- PPS22 - Renewable Energy (2004).
- PPS23 - Planning and Pollution Control (2004).

- PPG25 - Development and Flood Risk (2001).
- ODPM Planning response to climate change; Advice on Better Practice (September 2004).
- Measuring Progress. Preparing for climate change through the UK Climate Impacts Programme. UKCIP Technical Report (June 2005).
- Energy White Paper – Our energy future – creating a low carbon economy. DTI (2003).
- Securing the future: delivering the UK sustainable development strategy. The UK Government Sustainable Development Strategy (March 2005).
- Aviation White Paper, DTI (December 2003).
- Regional Spatial Strategies: Guide to Producing Regional Transport Strategies, DTI (2005).

### **Regional level documents**

- 2.14. A number of regional level policy and strategy documents were reviewed in order to identify:
- How they have considered climate change issues.
  - Significant implications for the RSS.
- 2.15. This enabled us to identify how other strategies are addressing climate change, which may require spatial expression in the RSS, and which may help to identify a range of other strategies/mechanisms which will be important for implementing the policies within the RSS (see **Appendix 5**).
- 2.16. The regional policy and strategy documents reviewed are listed below:
- Regional Economic Strategy for Yorkshire and Humber 2003-12.
  - Regional Economic Strategy for Yorkshire and Humber 2006-2015. Consultation Draft (July 2005).
  - Advancing Together: The Vision and Strategic Framework for Yorkshire and Humber (2004).
  - Draft Regional Housing Strategy for Yorkshire and Humber (February 2005).
  - Building the Benefits: Yorkshire and Humber Regional Sustainable Development Framework. Update 2003-2005.
  - Moving Forward: The Northern Way. First Growth Strategy Report: Summary (September 2004).
  - Annual Monitoring Report 2004: Regional Spatial Strategy for Yorkshire and Humber.

- Progress in the Region (Draft): Yorkshire Futures (2005).
- The Strategic Framework for Trees, Woods and Forests in Yorkshire and the Humber Region. Yorkshire and Humber Assembly (July 2005).
- Outline Action Plan for the Regional Forestry Strategy for Yorkshire and the Humber Region (July 2005).
- The Regional Environmental Enhancement Strategy for Yorkshire and the Humber. The Yorkshire and Humber Regional Environment Forum (September 2003).
- Climate Change Action Plan for Yorkshire and Humber. Consultation Draft (January 2005).
- Regional Greenhouse Gas Emissions Monitoring and Modelling Study. A final report submitted to Yorkshire Forward. Cambridge Econometrics (November 2002).
- Regional Greenhouse Gas Emissions Monitoring and Modelling Study. A final report submitted to Yorkshire Forward. Update of Baseline Data. Cambridge Econometrics (November 2003).
- Warming up the region. The impacts of climate change in the Yorkshire and Humber region. WS Atkins, Stockholm Environment Institute, The Met Office (2002).

### ***The approach of other regions***

- 2.17. The work being undertaken in two other regions to address climate change through their RSSs was reviewed, in terms of establishing parameters and measures for tackling climate change. In particular we looked at how RSSs which are further advanced have developed policies on climate change, and whether they have produced Implementation Plans.
- 2.18. Our review covered the RSS for the South East (July 2005), known as the 'South East Plan', and the Partial Review of RPG for the North West (RPG13) Submitted Draft minus Transport Policy Revisions (August 2004), see **Appendix 2**.

### ***Outputs***

- 2.19. Based on the review of the above documents, we sought to identify:
- The range of climate change related topics which the RSS should seek to influence.
  - The levers as set out in national legislation and policy for addressing climate change in regional policy.
  - Aspects which the RSS can legally require (or in turn require LDFs to cover in policy which can then be required of developers, or through LTPs).

- Aspects which the RSS cannot legally require, but can seek to encourage through a variety of means.
- The mechanisms for encouraging delivery of such outcomes.
- Any areas of Government legislation, policy or guidance that act as major barriers or obstacles to the region's climate change aspirations, which are apparent from the above stages of research.

## **STAGE 3: DELIVERY**

### **Current delivery**

- 2.20. The first task under this stage was to ascertain how LDFs and LTPs are currently reflecting RSS policies. This was achieved through a series of telephone interviews with local authority officers dealing with the Local Development Framework and Local Transport Plans for their areas. Five authorities were contacted with the basis for selection being to include one authority from each sub-region, at least one urban and rural authority, and authorities with stronger and weaker local economies.

### ***Questions for local stakeholders***

#### Planning policy

- 2.21. The following questions were asked of forward planning officers:
- 1(a) Are you aware of the contribution made by your local authority area to greenhouse gas emissions? What are they?
  - 1(b) Are you aware of the likely climate change impacts on your local authority area? What are they? Where are they experienced?
  - 2(a) How easy is it to comply with RSS policies on climate change when drafting your LDF? (e.g. policies S5 & S6) What, if any, difficulties are you experiencing?
  - 2(b) How have you incorporated (or do you plan to incorporate) the need to reduce the region's contribution to climate change into your LDF?
  - 2(c) How have you incorporated (or do you plan to incorporate) the impacts of climate change into your LDF?
  - 3(a) Is it clear from the RSS how the LDF should respond to the challenge of reducing greenhouse gas emissions? If not, why not, and how might this be improved?
  - 3(b) Is it clear from the RSS how the LDF should respond to the challenge of adapting to the impacts of climate change? If not, why not, and how might this be improved?
  - 4 How will you monitor compliance with LDF policies relating to climate change?

- 5 Are there any gaps in the evidence base? If so, what, and how should they be filled?
- 6 Do you agree with the approach in RSS in relation to climate change? If not, how should this be changed for the forthcoming draft?

### Transport

- 2.22. In addition to the questions listed above, local transport plan officers were asked whether the following mechanisms are being incorporated into LTPs, and if so, how would they be enforced:
- Modal shift targets.
  - Fleet upgrades.
  - Demand management.
  - Behavioural change.
  - Green Travel Plans.
- 2.23. We have not reviewed the draft LDFs or LTPs but have relied on the views of officers involved in their preparation. This reflects the focus of the consultation on seeking to establish whether local planning authorities are finding it difficult to reflect the RSS approach to climate change mitigation and adaptation in their LDFs and LTPs, and if so how the new RSS might be drafted to overcome these difficulties.

### **Future delivery requirements**

- 2.24. When considering what RSS can or should include, it is necessary to think beyond regional level delivery to LDFs and LTPs, to the implementation of RSS policies through other plans and strategies within the region. We therefore comment on whether responsibilities for implementation of policies in RSS are sufficiently clear, including the potential contribution of specific sectors to the achievement of climate change targets, and set out recommendations for improving the clarity of RSS in relation to implementation mechanisms.

### **Monitoring mechanisms**

- 2.25. The brief also required that consideration be given to the mechanisms required to monitor progress against policies in RSS that have an impact on climate change mitigation or adaptation issues, and gaps in current data availability. In order to address this requirement we:
- Identified current monitoring (indicators, targets etc.).
  - Considered where there are gaps in indicators, for example due to the expanded range of measures which RSS should address.

- Considered what additional indicators are required over and above the ODPM's Core Output Indicators for Regional Planning and those set out in the Annual Monitoring Report, or changes to existing indicators.

#### **Information on costs**

- 2.26. Finally, we provide pointers to existing studies of the potential economic and opportunity costs of the types of implementation measures associated with RSS policy encouraging or prescribing ways of delivering more environmentally sustainable development.

#### **STAGE 4: REPORTING**

- 2.27. The final output of the study is this research report, bringing together the outputs from each stage of the project.



### 3. REGIONAL CONTEXT

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- 3.1. This section summarises the contributions of the Yorkshire & Humber region to climate change emissions, and sets out what the regional impacts of climate change are likely to be and which will require adaptation.
- 3.2. It draws in particular on three regional studies which considered the contributions to climate change in the region and the likely impacts, and the Draft Regional Climate Change Action Plan:
- Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Cambridge Econometrics (2002). The objectives of this study were to recommend and implement a clear methodology to estimate regional emissions of greenhouse gases for 1990-2000, project emissions levels to 2010 based on various scenarios and model the impact that growth in different sectors is likely to have on emissions, employment and output.
  - Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Update of Baseline Data, Cambridge Econometrics (2003).
  - Warming up the region; the impacts of climate change in the Yorkshire and Humber region. WS Atkins, Stockholm Environment Institute, The Met Office (2002). The study describes the potential impacts of climate change on the Yorkshire and Humber region. The report provides technical details for public and private sector decision makers that need to incorporate climate change into long term strategies.
  - Climate Change Action Plan for Yorkshire and the Humber, Consultation Draft (January 2005). The Action Plan will provide the region with a framework to respond to the threat of climate change.

#### MITIGATION OF GREENHOUSE GAS EMISSIONS

- 3.3. The Yorkshire and Humber region contributes 12.5% of the total UK greenhouse gas emissions. The contributions to greenhouse gas emissions by sector along with recent trends are summarised below, with more detail provided in **Annex i to Appendix I**.
- The power generation industry is the greatest source of emissions due to the high proportion of UK electricity which is generated in the region (18% of all UK power generation capacity). This sector contributed 58% of the total greenhouse gas emissions in the region in 2001. While emissions reduced in the mid 1990s, they are predicted to increase over the period to 2010.
  - The transport sector is the second highest source of greenhouse gas emissions and is the fastest growing source of emissions, particularly the road transport and aviation sectors. Road transport contributed approximately 13% of the region's greenhouse gas emissions in 2001 and other transport contributed approximately 0.5%, not including international aviation.

- The third highest source of emissions is the domestic sector in Yorkshire and Humber, which contributes approximately 10% of the region's total greenhouse gas emissions. This contribution is expected to increase.
- 3.4. Other key sectors that contribute to greenhouse gas emissions are:
- Industry (energy intensive industry contributed 5% of the total greenhouse gas emissions from the region in 2001; other industry contributed 5%).
  - Agriculture/industry (5% of regional greenhouse gas emissions in 2001).
  - Commerce (3% of greenhouse gas emissions from the region in 2001).
  - Waste (no data available).
  - Health and education (no data available).
  - Construction (no data available).
- 3.5. In summary, the RSS must remain focussed upon evidence-based spatial planning objectives which are reasonably achievable by operation of the legal mechanisms which exist, in order to retain not only its utility as an expression of climate change policy for the Region, but also its credibility.
- 3.6. Given the size of their contribution to climate change, and the role of the RSS, the key sectors that the RSS is best placed to influence, in terms of seeking to reduce greenhouse gas emissions, are the transport and domestic sectors. Although the power generation industry is the greatest source of emissions, it is not directly influenced by the RSS, although the RSS can support the development of more sustainable alternatives e.g. renewable energy. Spatial and transport planning to reduce the need to travel by car and regional policies to improve energy efficiency in developments can contribute to the reduction of emissions from both the transport and domestic sectors. The RSS could also contribute to the reduction of greenhouse gas emissions by including policies to encourage the use of sustainable transport for freight, increase energy efficiency in the commercial and industrial sectors, reduce waste to landfill and encourage sustainable farming in relation to the other sectors outlined above.

## **ADAPTATION TO THE IMPACTS OF CLIMATE CHANGE**

- 3.7. There are a number of impacts associated with climate change in the Yorkshire and Humber region identified in 'Warming up the Region' (see above). The key issues and impacts are outlined below, along with examples of the adaptation measures needed to respond to impacts<sup>9</sup>.
- **Rising sea levels** will lead to coastal squeeze, increased flooding, increased coastal erosion and landslides. The Yorkshire and Humber region has 150km of

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<sup>9</sup> See: The planning response to climate change, ODPM, 2004; Climate change and local authorities: how prepared are you? An adaptation guide for local authorities in the UK, UK Climate Impacts Programme (UKCIP), 2003.

coastline and 82% of the region's coastal zone is designated as Heritage Coast. There are a number of small towns such as Bridlington and Scarborough along the coast. Adaptation measures include managing and improving coastal defences, and considering where 'managed retreat' might be more appropriate.

- **Increased flooding** from rivers, groundwater and urban drainage will affect both rural and urban areas. Areas at risk of flooding include the Vale of York, and parts of urban areas such as Leeds, Sheffield and Bradford. Improvements to urban drainage, the use of sustainable drainage systems, schemes that 'make space for water', and measures such as locating more vulnerable uses on higher parts of development sites, or on upper floors of buildings, while making buildings flood proof, are all ways of adapting.
- **Water resources** impacts will include summer droughts and changes in demand and supply, as well as water quality. This will affect aquifers, river abstractions and reservoirs in the region. Particularly sensitive areas include the Lower Derwent and the Doncaster/Selby sandstone aquifer. Water conservation measures will be needed, along with directing new development to areas where water supplies and treatment infrastructure is in place or planned.
- **Agricultural landscapes** will change as a result of climate change. Impacts will include an increased growing season, increased water demand and crop storage problems. 80% of the region is countryside and one fifth of the population live in rural areas. Adaptation measures will include the use of on-farm winter storage reservoirs to cope with the fluctuation in water availability.
- **Habitats and biodiversity** will experience impacts including northward migration of species, an increased risk of fires on the North York Moors and extreme weather events affecting species. Approximately 12% of the region is designated for nature conservation interest and it contains over a quarter of all UK BAP (Biodiversity Action Plan) species. Adaptation measures include protection and extension of existing habitats and corridors to reduce fragmentation and allow future movement, as well as allocating land in coastal areas to compensate for areas lost to managed retreat.
- **Buildings and construction** will be affected by the increased risk of flooding, and hotter drier summers will increase the need for insulation, ventilation and cooling systems (without adding to emissions), and will cause more subsidence. Buildings throughout the region will experience the impacts of climate change.
- **Industry** will experience impacts including environmental effects on buildings, increased likelihood of flood damage and possible adverse effects on transport infrastructure in addition to potentially positive impacts such as the availability of new raw materials. Adaptation measures will include flood proofing premises, choosing locations away from flood risk areas, designing buildings to cope with warmer temperatures, installing energy efficiency measures, and exploring opportunities in the environmental economy.
- **Transport** infrastructure will be affected by climate change. There may be disruption due to extreme weather events and increases in the likelihood of

landslides, flood damage and road traffic accidents. When locating new and designing new infrastructure these issues will need to be considered. The Yorkshire and Humber region contains a number of major roads, the Humber Ports, two airports and an extensive rail system.

- **Public services** impacts may include weather damage to buildings and heritage sites, health impacts of increased air pollution and an increase in disease vectors due to warmer, wetter winters. Local authorities' building stock and community facilities are likely to be affected, and emergency planning services will need to be reviewed to prepare for the increased risk of flooding and other severe events.

- 3.8. It can be seen that the impacts of climate change on Yorkshire & Humber are likely to be significant and wide-ranging. It is therefore critical to consider what role the RSS can play in helping the region address them. Ensuring that new development is guided away from areas that are likely to experience increased risk of fluvial and coastal flooding, and ensuring that additional development does not place increased pressure on locations that are likely to experience reductions in the availability of water resources is an important role for RSS. Similarly, it could also provide opportunities for biodiversity to migrate and adapt to climate change, for example through the provision of wildlife corridors, and safeguarding land for the creation of new habitats where coastal squeeze is likely to affect habitats that currently exist.
- 3.9. The approach taken to such issues in the current RSS and emerging Draft RSS is considered in the next section.

## 4. LEGAL REVIEW

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### INTRODUCTION

- 4.1. The legal review focused on identifying the statutory parameters of RSS in terms of its preparation and content, i.e. what it *can* do. It then focused on the topic of climate change. The full legal advice note can be found at **Appendix 3**.

### LEGAL MECHANISMS FOR DEALING WITH CLIMATE CHANGE ISSUES

- 4.2. There are three main aspects to the review of legal mechanisms that need to be considered with respect to the RSS:
- The legal basis for the preparation of the RSS, and what it can legitimately contain if it is to withstand legal challenge.
  - The scope of the planning system to deal with climate change issues.
  - Other legal levers relevant to climate change issues.

### LEGAL BASIS FOR PREPARATION OF RSS

- 4.3. The Planning and Compulsory Purchase Act 2004 provides the statutory basis for the preparation of RSS<sup>10</sup>. According to the Act, an RSS must set out the Secretary of State's policies in relation to the development and use of land within a region, and may include policies relating to sub-regions. In legal terms, provided that an RSS policy is concerned with 'the development or use of land' in a wider sense, then the policy-maker will not be acting beyond its powers (i.e. *ultra vires*) merely because it addresses an issue that is wholly or partly beyond 'traditional land use planning'. RSS policies that aim to inform and influence behaviour through means other than development control (e.g. promoting use of public transport) can therefore be within the powers of the Act, so long as the matter being addressed through the objective of achieving behavioural change is ultimately a land use matter. If, however, there is no consent regime or other legal or economic mechanism whereby an RSS policy promoting a preferred form of behaviour can be imposed, there will be serious limitations on the extent to which the RSS can 'deliver' behavioural change.

### Scope of the planning system to deal with climate change issues

- 4.4. Notwithstanding the availability of other levers, the planning system remains central to pursuing climate change objectives. The main legal planning mechanisms for expressing and applying climate change policies<sup>11</sup> are:

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<sup>10</sup> Also relevant are the Town & Country Planning (Initial Regional Spatial Strategy (England) Regulations 2004, and the Town & Country Planning (Regional and Planning Guidance as revision of Regional Spatial Strategy) Order 2004 (SI 2208 of 2004).

<sup>11</sup> In particular through the Planning & Compulsory Purchase Act 2004 and Town & Country Planning Act 1990

- The development plan (although policies are not in themselves legally binding).
  - The decision to grant or refuse planning permission, or to determine appeals.
  - The design of development in respect of which permission is granted, (i.e. the re-design of development as requested or required by the LPA to better achieve climate change objectives).
  - Planning conditions, obligations, and informatives.
  - Enforcement notices.
  - The compulsory purchase of land.
- 4.5. Under the Planning & Compulsory Purchase Act 2004, the **development plan** comprises **Regional Spatial Strategies** (RSSs), incorporating a Regional Transport Strategy (RTS), prepared by the regional planning bodies, and **Development Plan Documents** (DPDs) prepared by district councils, unitary authorities and, in the case of minerals and waste DPDs, by county councils.
- 4.6. Preparing the new development plans under the Planning & Compulsory Act 2004 provides an opportunity to review current development plan policies and strengthen them in relation to climate change, which is confirmed as a material consideration in PPS1, PPS11 and PPS12 (see below). Development plan policies, as the basis for development control decision making, are essential to ensure that the correct climate change mitigation and adaptation measures are implemented where practicable. DPDs also provide the necessary basis for **Supplementary Planning Documents** (SPD) which can provide more detailed guidance on mitigation and adaptation.
- 4.7. The **development plan** has an enhanced legal status in decision making as to whether or not to grant planning permission, and if so, on what terms. Section 38(6) of the 2004 Act places a duty on LPAs to determine planning applications ‘in accordance with the development plan unless material considerations indicate otherwise’. This duty does not differ materially from that which existed before – under Section 54A of the 1990 Act as amended. The RSS now has that enhanced legal status, whereas the predecessor regional level policy document, Regional Planning Guidance, did not.
- 4.8. Notwithstanding the changes to the development plan system brought in by the 2004 Act, a hierarchy of plans is still envisaged. The RSS is both part of the development plan, and a framework with which more ‘local’ parts of the development plan to be formulated by the LPA must – as a matter of law – be in ‘general conformity’.
- 4.9. Most development plans already include policies which seek to mitigate against climate change, for example, by reducing the need to travel to access employment and services, and where travel is necessary encouraging the use of more sustainable transport, so helping to reduce the emissions of greenhouse gases. Many also include policies to protect floodplains from development and to protect the quality of water resources.

- 4.10. For DPDs, as well as Core Strategies and Generic Development Control Policies, LPAs may choose to prepare an Area Action Plan where significant change or conservation is proposed for a particular area, for example, a major regeneration programme for an urban riverside site. Area Action Plans will include more detailed area-specific policies which relate directly to the developments proposed, or the conservation of the area. Again, these offer the opportunity to take into account the need for climate change mitigation and adaptation measures.
- 4.11. Despite the uncertainties associated with climate change, practice in response to climate change is developing rapidly, and SPD can perform a useful role in enabling LPAs to provide additional current guidance and advice to developers. SPD must be linked to a policy in the development plan. This may be in the 'saved plan' or a new RSS or DPD. When a saved plan includes an appropriate policy, bringing forward SPD is a way of providing detailed policy guidance on mitigating or adapting to climate change in advance of the adoption of the new DPD.
- 4.12. In line with guidance set out in the ODPM Planning Response to Climate Change, a climate-sensitive development checklist could be incorporated into SPD on sustainable development or sustainable design and construction. This encourages applicants to consider climate change mitigation or adaptation as part of existing sustainable construction requirements. Existing SPG on sustainable construction should be updated where necessary to include climate change mitigation and adaptation measures before it is taken forward for adoption as SPD.
- 4.13. Where an area of land has been allocated for development in a DPD, but further detail is required on how to implement this proposal, the LPA may decide to prepare a Development Brief for a particular area or site. This would include details of any specific measures required to mitigate or adapt to climate change reflecting the characteristics of the area or site, informed by consultation with the Environment Agency, utilities and other stakeholders. For example, there may be a requirement for the buildings to be orientated to maximise solar gain or be sited in a certain part of the site due to flood risk, with activities which are less adversely affected by flooding directed to other areas. There may be a known water shortage issue to address, or the need for compensatory flood water storage. The Development Brief may also include advice on how to implement design policies within the DPDs, such as what type of SUDS would be appropriate on the site, and how these will influence the layout of the development, where there is a need for greywater recycling and what landscaping will be appropriate, including details of drought resistant species.
- 4.14. Where an LPA does not have an appropriate development plan policy on which to base SPD, **good practice guidance** can be used to raise awareness and promote the need to incorporate climate change adaptation measures into new development. This may be adopted for development control purposes. Once the policy framework is in place with relevant policies adopted in RSS and DPD the guidance may be adopted as SPD (after following the necessary procedures as set out in PPS12).
- 4.15. Inclusion of requirements for climate change mitigation and adaptation in RSS, DPD policies or SPD is necessary to provide a firm foundation for the imposition of planning requirements through the development control process. The amendment to the design of proposed development to satisfy policy requirements may come

about during the application process. However, policy is not in itself legally binding – therefore the following legal delivery mechanisms are important tools:

- The decision to grant or refuse planning permission;
  - Planning conditions;
  - Planning obligations.
- 4.16. **Planning conditions** are used to ensure the development is carried out in accordance with agreed details and timescales and to overcome reasons for refusing planning permission. For example, providing details of a drainage scheme, SUDS feature, controlling the use of parts of the site etc.
- 4.17. **Planning obligations** are used when a condition cannot be applied, e.g. to transfer land or a sum of money, and most deal with the use or development of land. They are the subject of an agreement between the applicant and LPA.
- 4.18. The ODPM Planning Response to Climate Change notes that planning obligations/agreements may be necessary for dealing with a range of climate change issues.
- 4.19. Two key exceptions can be categorised as follows:
- Works or measures intended to affect **pre-existing buildings or land uses**, and not requiring planning permission.
  - Measures which affect only the **interior of a building** that cannot always readily be the subject of the valid planning condition or obligation. Matters such as raising circuitry levels to increase flood resilience or the installation of fixtures or equipment designed to minimise energy or water use are normally best addressed through advice and encouragement, e.g. through guidance or informatives or are by other control mechanisms, such as the Building Regulations. However, if a measure is required to enable the development to go ahead this may be controlled by conditions.
- 4.20. Where it is inappropriate for LPAs to impose conditions or negotiate planning obligations/agreements, but where the LPA considers that the developer should be made aware of certain matters, it is possible for the LPA to attach a short statement known as an **informative** to any consent. The Environment Agency also regularly suggests informatives are attached to planning permissions. An example might include the suggested use of water conservation measures in a new development if not addressed as part of the scheme details.

### **Other legal levers relevant to climate change issues**

- 4.21. In addition to the planning system, a number of other legal levers exist which can contribute to delivering climate change mitigation or adaptation. A full account of the various mechanisms is provided in **Appendix 3**. Of these, the most significant with respect to climate change are:

- Building Regulations.
  - Sustainable and Secure Buildings Act 2004.
- 4.22. The **Building Regulations 2000** (as amended) set out required minimum standards of design and building work for the construction of domestic, commercial and industrial buildings. They are designed to ensure the safety of people in and around buildings, to provide for energy conservation, and to provide access and facilities for disabled people. Before development takes place (and at specific stages during the construction process) applicants who have received planning permission must also ensure their proposals meet the standards set out in the Building Regulations. The process of applying for consent includes the submission of plans followed by site inspections during construction. The Building Regulations establish a discrete mandatory system with a criminal sanction for non-compliance.
- 4.23. Section I of the **Building Act 1984** sets out the broad aims of the Building Regulations and gives effect to subsequent Building Regulations (which are under constant review and change every year or so). These include preventing waste, undue consumption, misuse or contamination of water.
- 4.24. In addition, through the **Sustainable and Secure Buildings Act 2004** (see below) the Regulations now also have the broader aims of promoting sustainable development and protecting the environment.
- 4.25. With reference to the relationship between the planning system and Building Regulations, PPS1 provides in respect of RSS policy that:
- “Planning policies should not replicate, cut across or detrimentally affect matters within the scope of other legislative requirements, such as those set out in Building Regulations for energy efficiency”* (para 30).
- 4.26. In terms of climate change mitigation, Part L(1) of the Building Regulations requires that reasonable provision for the conservation of fuel and power should be made by limiting heat loss, providing space heating and hot water systems which are energy efficient, providing lighting systems that use energy efficiently, and by providing sufficient information with hot water and heating services so that no more energy is used than is reasonable. For water issues, the most important element of current Building Regulations is Part H which is focused on Drainage and Waste Disposal. However, this does not directly deal with the implications of climate change for water management, although it does include provision for sustainable drainage systems as an option to meet the required standards.
- 4.27. Some further relevant issues are covered by Part A of current regulations (which tackles subsidence) and Part C (which includes the protection of buildings from flooding). Again there is no explicit recognition of the impacts of climate change.
- 4.28. The **Sustainable and Secure Buildings Act 2004** aims to address sustainability by enabling additional Building Regulations that promote issues such as efficient energy and water use. It also brings a range of buildings that are currently exempt, including schools and those owned by utilities, under the scope of the Regulations. It also gives the power to require that in certain circumstances large-scale repair and

- renovation work should comply with the same standards of sustainability as equivalent new build.
- 4.29. Changes to the Building Regulations in 2005 (**Amendments 2005 to the Approved Documents**)<sup>12</sup> designed to tackle climate change will make buildings more energy efficient – new homes must be better insulated and use more efficient heating systems, as well as being tested for air pressure leakage<sup>13</sup>. *These changes are predicted to result in a 20% improvement in energy efficiency on average (and a 40% improvement when combined with the effect of the changes made in 2002)*. They will come into force in April 2006.
- 4.30. The Government’s **Sustainable Buildings Task Group** report ‘Better Buildings Better Lives’ (2004) sets out how best to advance the overall sustainability of new and renovated buildings in the UK. A central recommendation of the Group’s report is that the Government establish a unified **Code for Sustainable Buildings (CSB)** which brings together best practice in a measurable way and leads to an across the board raising of standards. The report proposes that the new code should be based on the BREEAM and Ecohomes systems. It suggests that the base level for the Code for Sustainable Buildings will be marginally above current Building Regulations and the highest level equal to current advanced practice.
- 4.31. The ODPM recently announced that it will adopt and promote the Code, especially for public buildings, thereby going beyond Building Regulations, covering not only fuel and power but also the efficient use of water. It will apply to all new residential development receiving Government funding and comes into force from April 2006<sup>14</sup>.
- 4.32. The Government is also taking action to improve the energy efficiency of existing development, building on the recent requirements to install more efficient replacement boilers and windows, and through its Decent Homes programme to refurbish social housing. The ODPM will be leading a review (with the Treasury, DTI and Defra) to identify measures to increase the sustainability of existing buildings<sup>15</sup>, with consultation with stakeholders planned for Spring 2006.
- 4.33. Also coming into force in April 2006 is the implementation of the **Energy Performance of Buildings Directive**, in relation to the refurbishment of existing buildings over 1,000m<sup>2</sup> floorspace, which, where feasible, should also include an upgrade in energy efficiency performance<sup>16</sup>. Recent changes to Building Regulations will implement this Directive.

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<sup>12</sup> Interim versions of Approved Documents have been published in preparation for the changes to the Building Regulations, and are available on the ODPM website ([www.odpm.gov.uk](http://www.odpm.gov.uk)). These comprise: Approved Documents – Conservation of fuel and Power Part L1A, L1B, L2A, L2B (2005 interim edition); Approved Document F – Ventilation (2005 interim edition).

<sup>13</sup> ODPM Press Notice 13<sup>th</sup> September 2005.

<sup>14</sup> ODPM Press Notice 13<sup>th</sup> September 2005.

<sup>15</sup> ODPM Press Notice 13<sup>th</sup> September 2005.

<sup>16</sup> ODPM Press Notice 13<sup>th</sup> September 2005.

### Other legal mechanisms

4.34. There are many legal mechanisms that are relevant to the role of the RSS in addressing climate change issues (see **Appendix 3**); the challenge is to ensure these powers are used in a co-ordinated way to achieve mitigation and adaptation objectives. Examples include:

- The **Water Act 2003**, which places a responsibility on public authorities, including local authorities to 'take into account, where relevant, the desirability of conserving water supplied or to be supplied to premises'.
- The **Water Framework Directive**, which came into force in 2000, which aims to achieve a defined standard of environmental/ecological quality for all inland coastal waters, and requires the preparation of River Basin Management Plans.
- **Environment Agency consent regimes**, which provide limited scope to achieve climate change adaptation measures, through land drainage consent, discharge licensing, and abstraction licensing, and contribute to mitigation objectives through waste management licensing.
- The **Road Traffic Reduction (National Targets) Act 1998**, which requires local authorities to specify targets (unless it is considered inappropriate to do so) for a reduction in the levels of local road traffic and a reduction in the rate of growth in the levels of such traffic. It includes the need to have regard to the emission of greenhouse gases.
- **The Environmental Assessment of Plans and Programmes Regulations 2004** (The Strategic Environmental Assessment (SEA) Regulations), which require bodies responsible for plans and programmes to assess the likely significant effects on 'the environment, including on issues such as.....climatic factors'.
- The **Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999**. As part of the Environmental Impact Assessment (EIA) process there is a requirement that aspects of the environment, including climatic factors, likely to be significantly affected by the development should be described.
- The support for renewable energy generation is provided by the **Electricity Act 1989**, which created the Non Fossil Fuel Obligation (under which electricity companies must buy a proportion of their fuel from renewable sources). This was supported by targets for renewable energy generation in the 2003 Energy White Paper. The Non Fossil Fuel Obligation is being gradually replaced by the Renewables Obligation which came into force on 1<sup>st</sup> April 2005, also under the Electricity Act. The proportion of electricity sourced from renewable sources is to reach 15.4% by 2015/16.
- The **Finance Act 2000** introduced the climate change levy, a tax on the use of energy in industry, commerce and the public sector. It is a key part of the Government's Climate Change Programme and is intended to promote energy efficiency, encourage employment opportunities and stimulate investment in new technologies, without increasing the tax burden.

- The **EU Renewables Directive (2001/77/EC)** requires member states to commit to specific targets for renewable energy. The indicative target for the UK is 10% of electricity from renewables by 2010.

## THE ROLE OF RSS IN LEGAL TERMS

4.35. The regional objective of securing climate change mitigation and adaptation translates into a series of discrete objectives such as reducing travel and conserving water resources, which all have a spatial dimension. From a legal perspective, the following three questions were therefore considered:

- What legally can the RSS do?
- What, within legal parameters, should it do?
- What legal levers are available to implement the RSS?

4.36. A more detailed discussion can be found at **Appendix 3** but the key findings are summarised here:

### What legally can the RSS do?

4.37. The following general points emerged from a consideration of the first issue, what can RSS do:

- The absolute parameters for lawful policy-making in an RSS are drawn widely. Provided that a climate change policy relates to the region (or part of it), and the use of land, then any rational policy can be lawful.
- It is however much easier to say (as PPS11 does) that the parameters of an RSS are not set by traditional land use planning, than to say what they are now set by. The role of the RSS as a 'spatial' strategy means that it may include policies which can impact on land use but which are not capable of being delivered solely or mainly through the granting or refusal of planning permission. For example, as well as including policies to conserve available water resources in future development the RSS may include policies to encourage water conservation within existing development. The practical issue of implementation (and credibility) is however a matter for policy consideration.
- While the principle of requiring a higher standard than the Building Regulations would be acceptable in legal terms, the Assembly would need to have good reasons to depart from this national policy.
- Strategic Environmental Assessment (SEA) can be considered as both a threat and an opportunity in legal terms. It is a threat insofar as a failure to meet the requirements of the SEA Regulations could make a policy unlawful. It is an opportunity because if it is done well it can not only deflect any legal challenge based on non-compliance with the Regulations but also other challenges which could be made.

- The parameters of lawfulness do not provide substantive answers to major strategic questions such as ‘How should the RSS strike the balance between regeneration and climate change mitigation?’ or ‘How far can the RSS promote behavioural change?’.
- Although the position of the Secretary of State is in principle relatively strong, the detrimental effects of having to defend the RSS against one or more legal challenges (including cost, delay and prejudice to the credibility and reputation of the RSS) should not be ignored.

### **What, within legal parameters, should the RSS do?**

4.38. The following general points emerge from a consideration of the second issue, what *should* the RSS do:

- There are no general legal barriers/obstacles impeding the inclusion of climate change policy or its implementation. On the other hand, there is no custom-made legal regime for delivering climate change objectives. Instead of a coherent set of powers held by a dedicated public body for the purposes of achieving climate change objectives and targets, there is a mosaic of legal regimes (see below) with gaps.
- There can be conflict between different climate change objectives. Legal barriers/obstacles may include in respect of one climate change matter a different legal regime whose purpose is in part to pursue another climate change matter.
- There would be a risk in seeking to impose higher standards for construction through the RSS than is provided for in the Building Regulations both because it makes it intrinsically more likely that a challenge would be made (whether it would ultimately succeed or not) and because it places the Secretary of State in the difficult position of having to justify the encouragement of standards regionally that he is not (yet) prepared to prescribe nationally. However, PPG25 does provide for higher standards of construction behind existing flood defences (PPG25, 2001, para. 69).
- Similarly, there would be a risk in prescribing the achievement of *specific* sustainability accreditations such as BREEAM because these are not statutory, not administered by a public authority, may not sit perfectly with the LPA’s own scoping for environmental impact assessment in relevant cases, and may change significantly over the lifetime of an RSS. In the absence of better or more widely respected sustainability criteria however, there would be much less concern as to an RSS policy which *encouraged* the LPAs to consider the use of BREEAM/Eco Homes, albeit of course without prejudice to their statutory duties in respect of environmental impact assessment.
- There is a robust foundation for strong policies including quota based/target based policies in an RSS (e.g. reference to the national target towards a reduction in greenhouse gas emissions) because these are dedicated to the achievement of UK legal obligations in international law. That is not to say that

any type of policy to promote emissions reductions or renewable energy will automatically be lawful – it must also lie within the general legal parameters for RSS policy (please see above) – but it does as a matter of impression provide policy-makers with a strong starting point for resisting legal challenges.

- With respect to the inclusion of sub-regional targets, e.g. for renewable energy or emissions reductions, there would be nothing intrinsically unlawful in this assuming that (amongst other things):
  - there is an adequate scientific/evidence base for the ‘common currency’ of CO<sub>2</sub> emission reduction which the approach appears predicated upon;
  - the SEA process supports the approach as against ‘strategic alternatives’;
  - the specific quotas/targets have themselves been arrived at rationally (ie without some logical flaw).

Insofar as there may be no robust conceptual framework nationally, and no robust evidence-base regionally, for such a ‘common currency’ approach at this time however, the first of the above assumptions could only be validated – if at all – in the light of further research.

### **What legal levers are available to implement the RSS?**

4.39. The following general points emerge from a consideration of the third issue, the legal levers available to achieve climate change mitigation and adaptation objectives:

- There are many legal levers which can be used to promote different climate change objectives but they lack coherence and do not comprise a comprehensive tool-kit.
- The Town and Country Planning System remains central, notwithstanding that its spatial influence is largely limited to new development (whilst most climate change influencing behaviour is not affected by any decision as to whether or not planning permission should be granted).
- If there is to be strong behavioural change there is a need for direct incentives/sanctions. Reliance on consent regimes alone could only action weak behaviour modification since these only bite as and when someone brings forward a project which requires consent under the relevant regime.

## **CONCLUSIONS**

4.40. The legal review found that the parameters for preparing RSS are drawn widely, and that provided that a climate change policy relates to the region (or part of it), and the use of land, then any rational policy can be lawful. RSS may include policies that can impact upon land use but which are not capable of being delivered solely through the grant or refusal of planning permission, so long as such policies are rational and are capable of implementation.

- 4.41. There need to be good reasons to depart from national policy and standards, such as the Building Regulations. Should the region wish to go down this route, there would be a risk that the Assembly may not be able to defend such an approach in the RSS, unless there are specific and rational reasons why the region (or part of it) should depart from national policy or require higher standards than those set nationally (e.g. in areas behind existing flood defences, as provided for in PPG25, 2001, para. 69).
- 4.42. RSS is policy only. It depends upon the operation of a range of specific legal regimes in order to influence the achievement of climate change objectives, e.g. the grant of planning permission.
- 4.43. It does not follow from the width of the legal parameters for RSS policy-making that all climate change objectives must be pursued within the RSS to the maximum extent. The RSS is one of a number of sister-strategies for the Region and a judicious assessment falls to be made as to which objective is best established in which of those policy documents. Clearly the special status which section 38 (6) of the 2004 Act confers upon strategic land use policies in the RSS will mean that policies with a strong land use dimension will tend to gravitate towards the RSS. But it does not follow that every policy – merely because it has a ‘spatial’ dimension in the widest sense – must be promoted through the RSS. The question is which of the types of policy documents is best suited to contain any such policy in the interests of the long-term robustness and credibility of the suite of strategy documents as a whole.
- 4.44. The RSS must remain focussed upon evidence-based spatial planning objectives which are reasonably achievable by operation of the legal mechanisms which exist, in order to retain not only its utility as an expression of climate change policy for the Region, but also its credibility.



## 5. POLICY REVIEW

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### INTRODUCTION

- 5.1. The aim of the policy review was to identify what the RSS *should* do to address climate change mitigation and adaptation. Key national and regional policies, strategies and guidance relating to issues which have an impact on climate change mitigation and adaptation were reviewed, and the implications for RSS identified. The documents reviewed are listed in **Section 2** of this report and tabulated in more detail at **Appendices 4** and **5**.
- 5.2. The section summarises what RSS *should* do in policy terms, and addresses the general aspects of climate change first before turning to specific topics. Before that it examines the role of RSS as expressed in national planning policy, and the role of other regional strategies.

### THE ROLE OF THE REGIONAL SPATIAL STRATEGY

- 5.3. The purpose and scope of an RSS is set out in Planning Policy Statement (PPS) 1: Delivering Sustainable Development (2005), and in PPS1 I: Regional Spatial Strategies (2004).
- 5.4. PPS1 I: Regional Spatial Strategies confirms that RSS has statutory status and is part of the development plan. RSS, incorporating the Regional Transport Strategy (RTS), provides a spatial framework to inform the preparation of Local Development Documents (LDDs), Local Transport Plans (LTPs) and regional and sub-regional strategies and programmes that have a bearing on land use activities (para. 1.2).
- 5.5. The RSS should include a spatial vision of the region, show how this will contribute to achieving sustainable development issues, and provide a spatial strategy for achieving the spatial vision, illustrated by a key diagram. This should be a 'broad development strategy for the region for a fifteen to twenty year period', and may look beyond this timescale when addressing issues such as climate change (para. 1.3-4).
- 5.6. The other key requirements for RSS include consistency and support for other regional frameworks and strategies, to be regionally and locationally specific in applying national policies to the circumstances of the region, to focus on delivery mechanisms: making clear what is to be done by whom and by when, and to provide a clear link between policies objectives and priorities, targets and indicators (para. 1.7). Although RSS policies must relate to the development and use of land, they should not be restricted to policies that can be implemented through the grant or refusal of planning permission (para. 1.6).
- 5.7. PPS1: Delivering Sustainable Development also includes guidance for the policy content of development plans (including RSS). In planning for sustainable development plans should promote development which creates inclusive communities, include policies to protect and enhance the environment, promote the prudent use of natural resources including through more efficient use of resources, and promote sustainable economic development (para. 14-26).

- 5.8. As the development plan, RSS and LDDs form the framework for taking decisions on planning applications. However, *‘only policies in plans which can be implemented through the granting of planning permission can form the framework for decisions under section 39 of the Planning and Compulsory Purchase Act 2004.’* (para. 31, PPS1). Nonetheless, other policies will still be a material consideration in decision making.
- 5.9. This issue means it is particularly important that the RSS should make clear as required by PPS11 (para. 1.18) whether its policies are:
- (i) Strategic development control policies which are to be implemented directly through the grant and refusal of planning permission, i.e. by local planning authorities.
  - (ii) To be delivered through LDDs and LTP, or
  - (iii) To be delivered through other means of delivery as agreed with the bodies concerned (the PPS does not specify who these bodies will be).
- 5.10. In addition, the requirement to prepare an Implementation Plan for RSS reiterates the emphasis on delivery of the reformed planning system.
- 5.11. As set out in PPS11 (para. 1.7), the RSS should not:
- Repeat national policies.
  - Address local issues which should be the subject of a Local Development Document.
  - Identify specific sites as suitable for development.

## THE ROLE OF OTHER REGIONAL STRATEGIES

- 5.12. PPS11 notes that it is essential that RSS both shapes and is informed by other regional strategies (para. 2.11), as the spatial expression of the vision for the future development of the region. The RSS will, in particular, be informed by the Regional Sustainable Development Framework and the Regional Economic Strategy, and others will also be relevant including the housing strategy, environmental and forestry strategies etc. The key regional strategies for Yorkshire and the Humber are set out below (and in **Appendix 5**).
- 5.13. **Advancing Together**, 2004 sits above the other regional strategies: it sets the framework and draws together the region’s plans and strategies. It establishes a shared vision for the region, sets out six clear objectives, provides a framework for integrating key regional strategies, presents a practical means to assess the sustainability of strategies and plans and identifies indicators for measuring progress in the region towards the six objectives (reported as ‘Progress in the Region’ 2005). It states that urgent attention will be given to the causes and impacts of climate change, and one of its aims is for minimal greenhouse gas emissions and a managed response to climate change.
- 5.14. The **Regional Sustainable Development Framework**, 2003-5 (RSDF) is the mechanism to realise the vision for a sustainable region expressed in ‘Advancing

- Together'. This vision is to build a more sustainable society that safeguards and improves our quality of life, environment and economy. The RSDf promotes ways of achieving economic growth alongside environmental and social benefits. With 'Advancing Together,' it is the regional starting point for preparing RSS. Cross cutting themes include efficient land use minimising travel, the same aim as Advancing Together in respect of climate change, and an integrated approach to regional energy policy in accordance with the Energy White Paper.
- 5.15. The **Regional Economic Strategy, 2003-12 (RES)** is the only strategy other than RSS to have statutory status. It provides a ten-year blueprint to grow the region's economy 'faster and better than our major competitors'. It explains what needs to be done, how, and who will be responsible for delivery. The RES provides practical action and support to business to reduce greenhouse gas emissions through efficiency measures, reduced travel and modal shift, and to implement adaptation measures and highlights the economic benefits of acting now, e.g. energy, resource and cost savings as well as market advantages. The current RES highlights the need to ensure the link between action on climate change and better economic returns is highlighted in RSS. A new draft RES (2005) covers the period 2006-15, which gives action on climate change more emphasis than the previous RES, including it as one of the top ten priorities for the region. It includes more specific actions on climate change than the current RES e.g. 'The region will take firm and imaginative action to encourage generation of renewable energy and 'resource productivity' in businesses, often linked to key sectors and clusters'.
- 5.16. The purpose of the draft **Regional Housing Strategy, 2005 (RHS)** is to influence the creation and management of housing and neighbourhoods in the region, with the goal of creating sustainable communities. The RHS aims to develop new housing in accessible locations, encourages energy and resource efficiency and the promotion of eco-friendly housing schemes. It provides guidance for LPAs on extending energy efficiency strategies
- 5.17. The **Northern Way, 2004**, is a Growth Strategy prepared by Government based on detailed analysis of the North's current economic assets, weaknesses and potential and complements the Regional Economic Strategies of the three northern regions. It encourages regional assemblies to consider a 'bolder approach' to creating sustainable communities, including the use of emissions targets, promotion of renewable energy and better public transport.
- 5.18. The **Regional Environmental Enhancement Strategy, 2003** presents 5-10 year regional objectives for environmental enhancement arranged within four themes, and a set of practical, 2-5 year actions to achieve those objectives through a combination of existing and new work. It aims to reinforce the RSDf by considering the same cross-cutting themes.
- 5.19. The Draft **Climate Change Action Plan for Yorkshire and Humber, 2005** will provide the region with the framework to respond to the threat of climate change. It will enable significant steps to be made over the next 3-5 years towards ensuring the region is both prepared for the likely impacts of climate change and to achieve 60%

greenhouse gas reductions by 2050. It sets out how a partnership approach will make a practical difference to combating climate change, adding value to national initiatives. For example, it seeks to work with power generators to identify impacts and implement risk management, assist promotion of low carbon technologies, encourage modal shift to public transport, support the RHS and planning policy to specify lower emission housing, assist in understanding climate impacts and to monitor emissions, promote sustainable construction and provide information to the construction sectors to improve climate resilience. The draft Action Plan states that the RSS should address the need to adapt to climate change by economic sector, and support the development of low carbon generating capacity.

- 5.20. **The Strategic Framework for Trees, Woods and Forests in Yorkshire and Humber Region, 2005**, provides a Strategic Framework for the future management of trees and woodlands in Yorkshire and The Humber region. It marries national priorities with local aspirations and identifies where a regional approach can add value. It seeks to identify what the important issues and opportunities are for our region's trees and woodlands so that policies such as the RSS and RES adequately reflect and benefit from them. An Outline Action Plan (2005) will put the Strategy into action.

## **NATIONAL PLANNING POLICY GUIDANCE ON CLIMATE CHANGE**

- 5.21. Whilst PPS11 states that, in preparing RSS the Regional Planning Body should have regard to climate change, it is PPS1 that gives the strongest steer on how development plans should do this:
- Regional planning bodies and local planning authorities should ensure that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change – through policies which **reduce energy use, reduce emissions** (for example, by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight), **promote the development of renewable energy resources**, and **take climate change impacts into account in the location and design of development** (para. 13(ii)). [emphasis added]
  - Development plan policies should take account of environmental issues such as...mitigation of the effects of, and adaptation to, climate change through the reduction of greenhouse gas emissions and the use of renewable energy; air quality and pollution; land contamination; the protection of groundwater from contamination; and noise and light pollution (para. 20, 1<sup>st</sup> bullet).
  - ...the potential impact of the environment on proposed developments by avoiding new development in areas at risk of flooding and sea-level rise, and as far as possible, by accommodating natural hazards and the impacts of climate change (para. 20, 3<sup>rd</sup> bullet).
  - Development plan policies should seek to minimise the need to consume new resources by making more efficient use or reuse of existing resources. Design

policies should include objectives that ensure developments make efficient and prudent use of resources.... Regional planning authorities should promote resource and energy efficient buildings, community heat schemes, the use of combined heat and power (PPSI, para. 22).

- In preparing development plans, planning authorities should seek to...address, on the basis of sound science, the causes and impacts of climate change, the management of pollution and natural hazards, the safeguarding of natural resources, and the minimisation of impacts from the management and use of resources (para. 27(x)).

5.22. PPSI I also states that the RSS should be in line with Government sustainable development targets. Transport is a particular target sector for reducing energy use and greenhouse gas emissions in national planning policy guidance, which states that:

- Development plans should encourage patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight (PPSI).
- The RTS must be informed by Government aims to increase accessibility and improve public transport (PPSI I).
- The RTS should provide (PPSI I):
  - Regional objectives for transport investment and management across all modes to support the spatial strategy and delivery of sustainable national transport policies.
  - A strategic steer on the future development of airports, ports and inland waterways, with targets to increase the proportion of journeys to airports made by public transport.
  - Guidance on priorities for managing and improving the trunk road network, and local roads of regional / sub-regional importance.
  - Advice on the promoting of sustainable freight distribution where there is a regional or sub-regional dimension.
  - A strategic framework for public transport that identifies ways to improve accessibility to jobs and key services, expands travel choice, improves access for those without a car and guides the location of new development.
  - Advice on parking sub-regional parking policies.
  - Guidance on strategic context for local demand management measures.

5.23. The third main target for climate change mitigation in national planning policy is to promote renewable energy. PPS22 provides the key guidance:

- RSSs should contain policies to promote and encourage development of renewable energy resources. RSSs should recognise a range of resources, characteristics, locational requirements and potential.

- The RSS should include regional renewable energy capacity target (derived from assessments of region's potential, taking into account impacts). This should be expressed as minimum amount of installed capacity for renewable energy in region (MW). 2010 and 2020 targets are required, with monitoring, review and upward revisions on a regular basis.
  - RSSs should contain an indication of output expected from offshore renewables.
  - Where possible, RSS targets should be disaggregated into sub-regional targets.
  - Planning applications for renewable energy projects should be assessed against specific criteria identified in RSS.
  - Locational considerations (designated sites, green belts etc) should be considered when developing renewable energy.
- 5.24. Beyond the above, national planning policy guidance provides little other advice on mitigation measures.

## **OTHER NATIONAL AND REGIONAL POLICY AND GUIDANCE**

- 5.25. References to the role of RSS across a range of climate change related issues can also be found in a number of national and regional policy and guidance documents. In addition, the early stages of the Sustainability Appraisal (SA, 2005) of the Draft RSS, highlighted key aspects of the emerging RSS relating to climate change that it identified needed addressing. A summary of the key themes addressed in these documents is provided below and is set out in detail at **Appendix 4** and **5**.

### **Mitigation**

#### Reducing emissions

- 5.26. The causes and impacts of climate change should be addressed through policies which reduce energy use and carbon emissions (PPSI, Advancing Together, 2004). The Regional Assembly should consider a bolder approach to creating sustainable communities, including the use of emissions targets (Northern Way, 2004).
- 5.27. In relation to energy use, the Government is relying on local authorities and regional bodies, working with the private sector and voluntary groups, to deliver real change on the ground, reflecting local needs. The RSS must put in place policies to contribute towards targets set out in the Energy White Paper. In the longer term, the Government wants to see more regional bodies developing innovative ideas and strategies that go beyond their statutory functions (Energy White Paper, 2003).
- 5.28. The Aviation White Paper (2003) acknowledges that the main responsibility for reducing emissions lies with Government and the international community. However, surface access improvements should be taken into account by regional bodies, and at the local level, the amount and location of future airport capacity must properly reflect environmental concerns.

- 5.29. 'Regional Climate Change Partnerships' should form a focus for RSS (Sustainable Development Strategy 2005). It is essential that the Regional Climate Change Action Plan is integrated into RSS (draft Climate Change Action Plan, 2005).
- 5.30. The RSS should review which sectors are the highest contributors to greenhouse gas emissions in the region, along with ways in which to reduce these emission through policy intervention. The RSS should also look at future growing trends in emissions and attempt to slow and reverse these trends through spatial planning (Cambridge Econometrics, 2003).
- 5.31. The RSS should complement the Regional Housing Strategy by supporting the specification of low emission housing and sustainable construction (Draft Regional Housing Strategy, 2005).

#### Resource efficiency

- 5.32. The Government expects more than half of emissions reductions to come from improved energy efficiency, and will continue to emphasise the benefits of CHP when regional planning guidance is reviewed (Energy White Paper, 2003). It is committed to raising the energy efficiency of homes by a fifth by 2010 compared with 2000 (UK Sustainable Development Strategy, 2005).
- 5.33. The RSS should ensure sufficient emphasis is placed on resource efficiency in new development – energy, water, land, waste etc. (RSDF, 2003-5). The RSS has a dual role to reduce resource use and waste (SA), in particular to reduce the amount of waste going to landfill (Advancing Together, 2004). The RSS should include a requirement for shared high quality design and environmental standards for all development receiving public sector support (Draft RES, 2006-15). A greater emphasis is needed on energy efficiency and sustainable construction (SA), by actively encouraging better 'Eco Design' (UK Sustainable Development Strategy 2005).

#### Renewable energy

- 5.34. A greater emphasis is needed in the RSS on renewable energy (SA). The Government is encouraging a strategic approach to delivering renewable energy projects through RPG and development plans (Energy White Paper, 2003)). RSS should include policies to promote renewable energy development, identify broad locations for development, and set (and meet) regional renewable energy capacity targets (derived from assessments of the region's potential, taking into account impacts), expressed as a minimum installed capacity (in MW) for 2010 and 2020, and where possible as sub-regional targets. Targets should be subject to regular monitoring, review and upward revision (PPS22). RSS should include criteria for assessing renewable energy development (PPS1, PPS22, Advancing Together, 2004). In summary, the RSS should provide a positive planning framework for renewable energy development (Draft RES, 2006-15).
- 5.35. The potential for problems around the security of energy supply in the future should be highlighted to promote renewable energy which is embedded within new development (Draft RES, 2006-15).

### Spatial strategy and transport

- 5.36. The spatial strategy should take account of climate change impacts and resource supply issues (e.g. water) in the location and design of development, and directing development to brownfield sites (PPS1, PPS11, PPG13, PPG3, PPS25 and Planning Response to Climate Change, Advancing Together).
- 5.37. Land use planning should be used to reduce the need to travel when identifying broad locations for development and promote walking and cycling (PPS11, PPG3, PPG13). RSS has a role to enable all people to make lifestyle choices that will not damage the environment, e.g. journey from home to work (SA).
- 5.38. The Regional Transport Strategy (RTS) should include policies that promote accessibility while reducing travel, improve public transport, provide advice to LTPs/LDDs on promoting more sustainable freight, provide a consistent approach to parking and set a clear context for traffic management and congestion charging. RTS should include 5 year regional targets to meet aims of reducing travel and improving access, including targets for surface access to airports (PPS11 / PPG13).
- 5.39. The latest (draft) Government guidance on producing RTS provides advice on what RTS should and should not include. It states that policies that generally encourage the development of traffic management measures or walking and cycling initiatives do not add value to the policy framework set out in national guidance. The RTS should reflect and inform airport operator master plans and local strategies for delivering more sustainable patterns of surface access to airports. The RTS should focus on freight issues, in particular the location of inter-modal freight interchanges. The RTS should also set out criteria and policy principles for taking forward specific demand management measures. (Regional Spatial Strategies: Guide to Producing Regional Transport Strategies, Consultation Draft, DTI, 2005). The UK Sustainable Development Strategy (2005) includes the Government's commitment to look seriously at road pricing.
- 5.40. The Government expects the relevant regional bodies to take the conclusions of the Aviation White Paper fully into account in drawing up their strategies. In particular, the RSS needs to reflect the Government's vision for growth of the region's airports and the need for improvements to surface access. A sustainable approach to airport development involves first making best use of existing infrastructure and, at the local level, decisions about the amount and location of future airport capacity must properly reflect environmental concerns (Aviation White Paper, 2003).
- 5.41. Policies must encourage modal shift (e.g. for freight and commuters). The Regional Assembly should consider how to reverse the trend in increasing road travel and whether land use policy to reduce the need to travel is being implemented effectively. (RSDF, Draft RES).

## **Adaptation**

### General

- 5.42. Spatial planning and insurance are critical mechanisms for coping with climate impacts (Preparing for climate change through the UK Climate Impacts Programme. UKCIP Technical Report, June 2005).
- 5.43. The RSS should take into account the impacts associated with climate change and ensure that adaptation measures are integrated into policies to allow the region to adapt to climate change. 'Planners are in a unique position to support climate change adaptation. Flood risks, the potential for new crops, changing health and transport patterns can all be mapped to develop scenarios of the future, with and without planning inputs. Improved mapping of the potential impacts is needed to incorporate climate change into regional plans.' (Executive Summary, *Warming up the region. The impacts of climate change in the Yorkshire and Humber region*. WS Atkins, Stockholm Environment Institute, the Met Office, 2002).
- 5.44. Developing away from floodplains/flood routes, installing sustainable drainage systems, reducing pressures on biodiversity through development and improving insulation and resilience of buildings will all reduce risks and increase resilience to climate change impacts (Regional Climate Change Studies).
- 5.45. The RPB should consider including generic regional guidance on susceptibility to fire, soil erosion, and measures to encourage groundwater infiltration (EIP into 2004 RSS, Report of the Panel, May 2004).

### Flood risk and water resources

- 5.46. The precautionary principle should be applied as far as possible when considering development in a flood risk area. Flood risk and its potential impacts should be taken into consideration in development strategies, using a sequential approach to locating development in areas of lowest risk. The RSS should identify principal areas at risk, and set the framework for local planning authority maps of flood risk. Inappropriate development should be discouraged in these areas and the remaining flood risk managed sustainably. Higher standards of construction may be necessary behind existing flood defences (PPG25, para. 69). RSS should ensure run-off is managed locally (PPG25, The Planning Response to Climate Change, 2004).
- 5.47. RSS should include policies which allow for change and uncertainty in supply of water and promote water efficient development. The impact of climate change on water resources should be considered as part of sustainability appraisal of RSS (The Planning Response to Climate Change, 2004).

### Urban Development and Infrastructure

- 5.48. RSS/RTS should highlight the need to ensure new transport, energy, water and sewerage, telecommunications, and emergency services infrastructure is resilient to climate change impacts (The Planning Response to Climate Change, 2004).

### Landscape and Biodiversity

- 5.49. RSS has a role to ensure climate change is managed to protect landscapes (SA). Locationally specific guidance on adaptation measures, based on landscape character areas e.g. Upland Areas should be accorded priority as a landscape character type when considering adaptation measures (EIP into 2004 RSS, Report of the Panel, May 2004). Biodiversity still a concern (SA) and the RSS should seek to reduce habitat fragmentation (Advancing Together, 2004).

### Economic development

- 5.50. 'RPBs working with RDAs and with reference to the RSDF can ensure that economic development is not undermined by climate change impacts.' (The planning response to climate change, 2004). The RSS should provide a regional framework to encourage business to take up economic opportunities as a result of climate change (e.g. to expand tourism, the environmental economy: energy efficiency and renewable energy, markets for recycled goods, and exploit benefits to agriculture and forestry), and plan for negative impacts. New strategic facilities should be located away from areas at risk or should be resilient to impacts. The RSS should promote regional self-sufficiency in waste management (The planning response to climate change, 2004, Current RES, 2003-12).
- 5.51. The RSS should stress links between action on climate change and better economic returns and competitiveness, e.g. through resource efficiency, and encourage embedded renewable energy by linking to security of supply issues (Current RES, 2003-12).

## **CONCLUSION**

- 5.52. When considering the legal parameters and policy requirements for RSS it is necessary first to reflect on two things. Firstly, a legal constraint is an absolute one, that is, the RSS cannot go beyond the legal parameters for its preparation. If it does it will be liable to successful legal challenge. Secondly, a planning or other policy constraint is not absolute. The RSS will naturally be broadly in line with national planning policy as it - like that policy - will be formally issued by the First Secretary of State. PPSI I is a policy specifically about RSS and how to prepare it. It summarises certain legal requirements which must be adhered because they are legal in character; where it goes further it must nonetheless be regarded as a strong policy constraint. The vast majority of relevant national policy however is about substantive issues. A RSS could depart from such policy where there are good reasons - likely if they exist to relate to particular characteristics or circumstances of a region - to do so.
- 5.53. As found by the Policy Review, RSS has a clear role, to set out the spatial vision for the Yorkshire and Humber region, and provide a spatial strategy to achieve that aim (PPSI I). It provides the spatial expression of other regional strategies, and is a key part of implementing the region's vision for the future as set out in 'Advancing Together' 2004. It should be focused on regional specific spatial matters. In terms of climate change it is clear from national planning policy that the RSS is expected to contribute to achieving the UK's climate change objectives, within the context of sustainable development, and specifically to contribute towards the achievement of national emissions reductions targets (PPSI). It must ensure development plans

address the causes and impacts of climate change through policies which reduce energy use, reduce emissions, promote renewable energy and take climate change impacts into account in the location and design of development (PPSI). Reducing the need to travel and encouraging sustainable modes of transport through spatial planning and the Regional Transport Strategy are key ways the RSS should seek to achieve climate change objectives. Addressing the impacts of climate change is similarly a role for RSS, whether this relates to flood risk and water resources policies, or ensuring built development and urban environments are more resilient to impacts of climate change (PPSI and PPSI I).

5.54. There are therefore both considerable requirements and also encouragement of the RSS in national and regional policy, guidance, strategies and commentary to deal with both the mitigation and adaptation aspects of climate change. With reference to the regional context a number of potential conflicts resulting from this were identified, including:

- Potential difficulties associated with the inclusion of regional emissions targets in RSS which are unlikely to be met see also **Sections 3, 6 and 7**).
- Whether the RSS should go beyond national standards for building construction (see also **Sections 4 and 6**).
- The potential conflict between regional economic regeneration objectives and achievement of climate change objectives.
- The issue of aviation development.

5.55. There is therefore a considerable amount of tension regarding the expectations being placed on RSS to grapple with climate change issues by both Government and regional stakeholders, and the ability of the RSS to deal with these issues in legal terms, due to the role of the RSS as a spatial plan, and its limited direct influence on behavioural change.

5.56. The next section examines how the current RSS is addressing climate change objectives, both in terms of mitigation and adaptation, and compares this with the approach of two other regions.



## **6. REGIONAL COMPARISON OF RSS**

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### **INTRODUCTION**

- 6.1. This chapter reviews the approach to climate change in the current RSS for Yorkshire and the Humber (December 2004), and the direction of the emerging new RSS with reference to topic papers, the early stages of the Sustainability Appraisal, and the Report of the Panel who examined the current RSS. The progress that current RSS is making in key areas is also considered.
- 6.2. It then reviews the approach taken in the South East of England and in the North West, as set out in the draft RSS for the South East (July 2005), known as the 'South East Plan', and the Partial Review of RPG for the North West (RPG I3) Submitted Draft minus Transport Policy Revisions (August 2004).
- 6.3. The South East was chosen as it is the most advanced of the new RSS, and as the strongest economic region would be expected to set the highest benchmarks for action on climate change in association with new development. The North West was chosen as it is broadly comparable to Yorkshire and the Humber in terms of economic issues, and has similar geographical characteristics, both as a neighbouring region, and in its location within the country. We have briefly looked at the EIP for the North West RPG, but not for the South East, as the RSS has not reached that stage. No review of the sustainability appraisals in relation to these two regions was undertaken.
- 6.4. Finally, the three regions are compared in relation to their planning policy approach to mitigation and adaptation, and their approach to implementation, including whether Implementation or Action Plans have been prepared in relation to climate change.

### **YORKSHIRE AND HUMBER RSS**

- 6.5. This section describes the approach to climate change in the current RSS for Yorkshire and the Humber, published in December 2004. It focuses on the key policies in the current RSS (December 2004) that were identified in the study brief as seeking to address the issues and impacts associated with climate change in the Yorkshire and Humber region. Indicators and targets to measure performance against policy objectives are highlighted.
- 6.6. At the end of the sections on mitigation and adaptation a brief comment is provided on how the emerging RSS is seeking to take forward the approach to climate change, with reference to the topic papers produced in Spring 2005 to inform public consultation on the preparation of the new draft RSS.
- 6.7. We consider progress towards climate change objectives with reference to the Annual Monitoring Report, 2004.
- 6.8. The Report of the Panel who examined the current RSS is considered in relation to the Panel's views on how climate change policy should be taken forward in future

reviews. Finally, we refer to the key points raised in relation to climate change in the early stages of the Sustainability Appraisal of the new RSS.

## Mitigation

### Current RSS

- 6.9. The Yorkshire and Humber RSS has led the way in addressing climate change through regional planning policy: it is understood to be the first RSS in the country to include an overarching and cross cutting policy on climate change.
- 6.10. The main strategic policies relevant to climate change in the current RSS are Policies S5 and S6:
- Policy S5 *Climate change* is a strategic, cross-cutting policy which seeks to reduce the region's greenhouse gas emissions by at least 20% below 1990 levels by 2010 and by at least 25% below 1990 levels by 2015. Indicators to measure progress comprise the total greenhouse gas emissions from the region, and by sector (transport, industry, domestic). Policy S5 is highlighted as being relevant to chapters in the RSS concerning spatial strategy, housing, transport, the built and natural environment and resource management.
  - Policy S6 *Sustainable use of physical resources* is also particularly relevant to climate change mitigation as it seeks the inclusion of policies in LDFs to increase energy efficiency, measures to reduce the need to travel and encourage modal shift, and help to achieve regional renewable energy generation targets. At least 9.4% of electricity consumed by 2010 should be from renewable sources, and 22.5% by 2020, with specific targets for installed renewable energy generation capacity (see also R12 below).
- 6.11. S3 provides an overall strategic steer to the spatial strategy, directing development to existing settlements to make them more attractive places to live, work, shop and spend leisure time. Indicators to measure progress are the quantity of vacant land and properties, access to services in rural areas and quality of surroundings. There are no targets for this policy.
- 6.12. S4 also reflects the need to address climate change, as it refers to the need for energy efficient design of new development, sustainable waste management and the use of trees in urban areas, as part of a wider approach to good design which should be reflected in LDF policies and design guidance. Indicators to measure progress comprise the numbers of urban design frameworks, village design statements and design guides produced, and the percentage of development plans including minimum density standards (there are no targets).
- 6.13. There are a number of topic based policies in the RSS that address climate change as an issue in terms of mitigation. These policies are outlined in the following chapters.
- 6.14. The Spatial Strategy (most notably P1 & P3) focuses on reducing the need to travel through the location of new development, and the need for good accessibility by public transport. This is reflected by policies guiding the location of employment sites such as business parks and offices to existing town centres where possible, or to

urban peripheral sites with good access by public transport. P3 addresses the need to review the region's large stock of longstanding allocations for housing and employment uses and proposed road schemes, to assess whether they remain appropriate / necessary. The target for P1 *Strategic patterns of development* is to reduce the percentage of development plan allocations outside urban areas, and the percentage and area of employment allocations on greenfield land. Also to be measured are the number of jobs created in the Humber Trade Zone and Dearne Valley Development Zone and the percentage of development plans informed by up to date urban capacity studies. P3 *Review of existing commitments* will be measured through re-allocations of employment and out-of-settlement housing land and the highways schemes removed from local authority programmes.

- 6.15. The Transport Chapter (T1-T11) forms the Regional Transport Strategy (RTS). It focuses on the need to achieve modal-shift to sustainable forms of transport, improved accessibility and to reduce the need to travel. In particular, policies require the integration of land use and transport planning (T1-3), with development generating large numbers of transport movements to be located where it will be accessible by sustainable modes, make best use of existing transport networks and enhance the viability of public transport services. When preparing development plans and LTPs opportunities should be sought to deliver integrated freight distribution to maximise rail and water use for freight movements (T4). A regional demand management strategy promotes the progressive reduction in long stay parking, along with a longer term objective for a partnership approach to area wide road user charging once national policy is in place to support it (T5). Other policies promote investment in public transport (T6), rural areas (T7), tourism related sustainable transport measures (T8), a presumption against increasing highway capacity (T9) and making the best use of existing infrastructure at regional airports (T10), while improving public transport access where possible.
- 6.16. The RTS includes regional targets for accessibility (RTS accessibility criteria are to be included in all development plans, met by all housing developments and all major new industry, commerce and retail developments with varied timescales), parking (for LPAs to adopt RTS standards, and for the average parking spaces to be 1.5 per dwelling on all major developments) and for accessibility to regional airports by public transport (20% airports to be accessible by public transport by 2016). Other regional transport indicators (which are not linked to specific targets) include modal split, distance travelled, and the percentage of freight tonnes/km in the region which are transported by sustainable modes.
- 6.17. The RTS also refers to national targets to be achieved through development and local transport plan policies and measures (Table 7.6A). These relate to congestion (reduce to below 2000 levels by 2010 on inter-urban trunk roads / within large urban areas), road maintenance (Halt deterioration in condition of local roads by 2004 and eliminate backlog of repairs by 2010), the number of bus passenger journeys (increase by 12% from 2000 levels by 2010) and passenger satisfaction (improve accessibility, punctuality and reliability of public transport), the number of cycling trips (triple by 2010 from 2000 base), the number of people killed or seriously injured (separate targets for children), the number of light rail passenger journeys (increase by 12%

- from 2000 levels by 2010) and percentage of rural householders within 10 minutes walk of an hourly or better bus service (33% increase by 2010).
- 6.18. The Housing Chapter (HI-3), sets out a sequential approach to the allocation of housing land. The regional target for housing on brownfield sites is to provide at least 60% of housing development in the region on previously developed land for the period 1998-2016, with provisional targets for each strategic planning area set out in Table HI (ranging from 49-80%). There is a further benchmark relating to the average density of new development (38 dwellings per hectare). In addition, the progress in implementing H5 *Making the best use of existing housing stock*, will be measured against a target to reduce the regional housing vacancy rate to 3.5% by 2016.
- 6.19. The RSS policies on sustainable resource management cover minerals, waste and energy (R4-R10, R12). The provision for recycling / reprocessing of minerals should be increased to reduce mineral extraction (and energy used), along with the promotion of rail and water to transport mineral products (R4). The target for R4 is to 'reduce' the proportion and amount of aggregates from primary sources / used. Policies R5-10 address the need for more sustainable waste management, with targets for the adoption of strategic principles within all plans and strategies, sub-regional targets for the quantity of municipal waste recycled / composted (with an overall regional target of 33% by 2016), and targets for densities and accessibility of regional recycling bring sites. Targets for the provision and capacity of waste management facilities are to be confirmed in the new RSS.
- 6.20. In relation to energy generation, transmission and supply development plans should include measures which help to secure sub-regional targets for installed renewable energy generation, maximise the use of renewable energy resources, include locational and environmental criteria working with developers and communities and providing supplementary design guidance as necessary, maximise the use of community heating projects and work towards the national target for installed Combined Heat and Power (R12). There is no target for the reduction of energy consumption in the region (only 'reduce'). The sub-regional targets for minimum installed renewable energy generation capacity by 2010 are: Humber 146MW, North Yorkshire 194MW, South Yorkshire 100MW, West Yorkshire 74MW, Off shore 160MW, with a regional total of at least 674MW by 2010 and at least 1850MW by 2020. In addition, development plans should work towards the national target of 10GW of good quality CHP by 2010.
- 6.21. The chapter on the Built and Natural Environment includes a policy which seeks to increase the region's area of woodland to 6.5% of the region's land area by 2016, with the South Yorkshire Forest to achieve 12% woodland cover by 2016. Increased woodland cover could act as a carbon sink to reduce emissions and / or a source of biomass for renewable energy generation (N4).
- 6.22. Additional policies which aim to reduce climate change in terms of mitigation are associated with the economy, although no cross reference is provided to climate change policies at the beginning of the economy chapter (E2 & E4, although the only target relates to farm diversification). Social infrastructure policies are also relevant (SOC1-SOC4), again focusing on the need to reduce car travel, with development

- plans and NHS local delivery plans to specifically encourage healthcare services to be retained / provided in locations accessible by good public transport (see also T7). No further out-of-centre regional or sub-regional shopping centres should be permitted (SOC3, but no target is provided). Sports and recreation facilities must be planned for energy efficient use (SOC4, with the only target relating to audits of open space, sport and recreation facilities, to be carried out by all local authorities).
- 6.23. In summary, the overriding approach to reducing greenhouse gas emissions from the Yorkshire and Humber region throughout the current RSS is by reducing the need to travel through spatial planning, and promoting improved accessibility via sustainable transport modes, to help achieve modal shift from cars and road based freight to more sustainable forms of transport. This is supplemented by policy to promote the sustainable use of resources including energy efficient design and the inclusion of sub-regional renewable energy targets, to help promote renewable energy development as an alternative source of energy to fossil fuels.
- 6.24. A review of all those policies in the RSS that address climate change mitigation can be found in **Annex iii** of **Appendix I**.

#### ***Topic papers for draft RSS***

- 6.25. The topic papers used to inform consultation on the draft RSS in Spring 2005 include a number of references to climate change. The topic paper on the Spatial Strategy recognises that reducing the region's contribution to climate change is a key issue in choosing the preferred spatial strategy for the region, and is linked to reducing the need to travel. The need for action to tackle climate change and meet targets for emissions reductions is specifically acknowledged.
- 6.26. The Climate Change topic paper highlights the Regional Assembly's commitment to building on the objectives and policies in the current RSS to address the causes of climate change. It refers to the need for regional climate change data including its spatial effects, as identified in the Regional Climate Change Action Plan, and notes that the Sustainability Appraisal will assess how far each policy will help address the causes of climate change.
- 6.27. Topic papers on Transport make few direct references to climate change but do focus on achieving sustainable development by reducing road travel, including through demand management (e.g. connected with economic regeneration and sustainable tourism), and by improving sustainable freight and public transport. These measures seek to reduce the contribution of transport to climate change. In addition, the topic paper on Aviation notes that expanding airport capacity in the region would be inconsistent with efforts elsewhere in the RSS to reduce the environmental impact of transport, but that most of the proposals to mitigate the environmental impacts of aviation growth would require national, European Union or international agreement.
- 6.28. The Energy topic paper identifies the key issues for the draft RSS as the possibility of specifying renewable energy targets for individual local authority areas, and the extent to which the RSS should consider energy issues outside the remit of statutory land use planning. The Assembly is considering whether there might be scope to prepare guidance to assist local authorities in achieving carbon reduction targets. The

consideration of these issues is being taken forward for one sub-region through a Sustainable Energy Study (in North Yorkshire) which has resulted in the production of draft Sustainable Energy Planning Guidance for local authorities in the county<sup>17</sup>. This includes guidance to inform LDF policy making for renewable energy development and guidance for local authorities on promoting better energy efficiency in existing and new development.

## **Adaptation**

### **Current RSS**

- 6.29. As with mitigation, the strategic policies that address the need to adapt to the impacts of climate change are Policies S5 and S6:
- Policy S5 requires that local and regional authorities should take account of land use implications of predicted impacts and successfully adapt to both positive and adverse affects (no targets).
  - Policy S6 states that local authorities and others should promote sustainable water use measures in existing and new development (no targets).
- 6.30. The key topic based policies that focus on adapting to the impacts of climate change are associated with resource management (R1-R3). These policies highlight the need for effectively managing the region's coastal zone, managing flood risk, avoiding development where possible in floodplains, and managing water resources sustainably, including the promotion of sustainable drainage, water conservation measures within developments and on-farm water storage. Water resources should be taken into account when locating development. Indicators for R1-R3 focus on Integrated Coastal Management Plans, planning applications permitted contrary to the advice of the Environment Agency, and the take up of sustainable drainage or water conservation measures. However, no targets are proposed.
- 6.31. In addition to these policies, Policy N1 on biodiversity highlights the need to halt and reverse habitat fragmentation which should help biodiversity to adapt to the impacts of climate change (with a target of zero loss to priority habitats).
- 6.32. A summary of policies in the RSS that deal with adapting to the impacts of climate change can be found in **Annex iii of Appendix I**.

### **Topic papers for draft RSS**

- 6.33. The topic papers used to inform consultation consider how to take this approach forward in the new draft RSS, and note that the Government Office will lead on potential mapping of climate change impacts. The topic papers focus on how to adapt through spatial planning measures to increased flooding, coastal erosion, water resource issues and impacts on biodiversity. Adaptation measures cited include preventing development in areas at risk of flooding or at risk of drought or over

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<sup>17</sup> Land Use Consultants with the National Energy Foundation, for a Partnership of Local Authorities in North Yorkshire. 2005 – ongoing.

abstraction, flood defence measures, managed coastal retreat and effective habitat management, including the role of certain habitats, such as forestry, in reducing flood risk.

### **Implementation**

- 6.34. The current RSS includes at the end of each chapter a table setting out how each policy is intended to be implemented. For example, Policy S5 *Climate change* is to be implemented through development plans, LTPs, strategies and investment programmes. Local authorities, the Environment Agency and Yorkshire Forward are identified as having lead roles with developers, the Regional Assembly and partners having support roles. Chapter 11 sets out the Assembly's plans for future Monitoring, Implementation and Review of the RSS, which will comprise the production of a Monitoring Manual and Action Plan, and an Annual Monitoring and Implementation Report.
- 6.35. The draft Climate Change Action Plan (January 2005) provides the region with the framework to respond to climate change and aims to develop strategies to cope with the impacts of climate change and reduce greenhouse gas emissions. The Action Plan aims to enable the region to make significant steps over the next 3-5 years towards mitigation and adaptation targets. Its aims include the objective to support and inform the development of RSS policy on climate change. The Action Plan provides information on mitigation and adaptation techniques by sector, and sets out how it will support these through partnership action.
- 6.36. The RSS Annual Monitoring Report (2004) identifies that while carbon emissions have dropped in the industrial and domestic sectors they have grown in the transport sector. The RSS needs to reflect and respond to this issue. The RSS also needs to improve the proportion of development which is carried out on brownfield land, and consider whether it can do more to improve the energy efficiency ratings of homes. Regional renewable energy capacity must be increased to achieve objectives in this sector. The RSS needs to recognise the impacts of climate change on biodiversity and its policies should be updated in line with targets in the Regional Forestry Strategy. While progress is being made on waste recycling, overall waste is increasing across the region.

### **Examination in Public into the current RSS: Report of the Panel (May 2004)**

- 6.37. The Panel supported the approach of the RSS to climate change. Specifically, it supported Policy S5 and its inclusion of a regional target for reducing greenhouse gas emissions (subject to clarification on how the regional target sits within the national target, which has been included in the supporting text of the RSS). The Panel also supported the twin-track approach of Policy S5 in terms of the need for action on mitigation and adaptation to take place concurrently rather than sequentially.
- 6.38. In considering whether the RSS could provide more guidance on the locational aspects of climate change adaptation action, the Panel looked to the Regional Climate Change Action Plan (which it saw in draft form) to inform the next Draft RSS (Recommendation 3.4(i)). It made particular reference to the potential for guidance

to be helpful where it relates to landscape character types and considered that the output from such an approach should also be used in preparing locational guidance on adaptation to climate change within RSS (para. 3.14).

### **Sustainability Appraisal of the Draft RSS (2005)**

- 6.39. The early stages of the Sustainability Appraisal of the Draft RSS identified the following key implications for RSS in relation to climate change:
- Current trends in lifestyles (e.g. increased travel distance to work) contribute to major issues within the region such as climate change. The RSS has a role to enable all people to make lifestyle choices that will not damage the environment.
  - The region is not meeting energy targets. Greater emphasis is needed on energy-efficiency (business and domestic), increasing renewable energy capacity including generation, sustainable construction and transport. Greater emphasis is needed on managing impacts.
  - Biodiversity is still a concern, despite slowing losses, as it is threatened further by climate change.
  - The RSS has dual roles to decrease resource use and discourage waste.
  - The RSS has a role to ensure climate change is managed to protect landscapes.

### **DRAFT SOUTH EAST PLAN**

- 6.40. The draft South East Plan is the Regional Spatial Strategy for South East England, which will cover the period to 2026. This review addresses the latest available draft, Part I: Core Regional Policies (July 2005). The Plan provides the statutory regional framework that forms the context within which LDDs and LTPs need to be prepared, as well as other regional and sub-regional strategies and programmes that have a bearing on land use activities. These include the regional economic and housing strategies as well as strategies and programmes that address air quality, biodiversity, climate change, education, energy, environment, health, and sustainable development. A summary table of the policies in the draft South East Plan which seek to address or are relevant to climate change can be found at **Appendix 2**.

### **Mitigation**

- 6.41. The draft South East Plan has a series of cross cutting policies which apply to all aspects of the Plan. Policy CC2 *Climate Change*, states that the Plan policies will promote measures to mitigate and adapt to the forecast effects of climate change, and includes regional targets to reduce CO<sub>2</sub> emissions (by at least 20% below 1990 levels by 2010 and by 25% by 2015). This will be achieved by improving the energy efficiency performance of buildings, reducing the need to travel, promoting land uses which act as carbon sinks, encouraging the development and use of renewable energy and reducing the amount of biodegradable waste which is landfilled.
- 6.42. Policy CC3 *Resource Use* seeks to stabilise the region's ecological footprint by 2016, by increasing resource efficiency of new and existing development (energy, water and

- other resources). This will be done through development plan policies, while recognising the need for complementary legislation and fiscal measures by Government, along with behavioural change. Policy CC4 *Sustainable Construction* states that all new construction and redevelopment is expected to adopt sustainable construction standards, including high standards of energy efficiency exceeding current Building Regulations and reflecting best practice. The supporting text states that best practice standards such as BREEAM are well established and should be used throughout the region.
- 6.43. Policy EN1 states that high energy efficiency ratings should be attained in all new development, where appropriate, through the use of best practice guidance such as BREEAM and National Home Energy Rating. Public bodies should maximise energy efficiency when refurbishing existing stock. The integration of Combined Heat and Power (CHP) using biomass fuels into large scale mixed use development is supported (EN2).
- 6.44. Policy EN1 also includes the target that at least 10% of energy demand for development should be provided from renewable sources for housing schemes over 10 units and commercial schemes over 1,000m<sup>2</sup>. Regional and sub-regional renewable energy targets are included in the draft Plan, with a focus on wind (on and offshore) and solar energy projects (EN3, EN4). Criteria based policies for renewable energy development should be included in LDDs, based on a collaborative approach between local authorities, communities, industry and other stakeholders to assist in achieving the targets (ENV6).
- 6.45. Policy CC8 *Urban focus and urban renaissance* concentrates development in urban areas, to make the best use of land (with a target of at least 60% of new development to take place on previously developed sites), and reduce the need to travel, combined with improvements to public transport.
- 6.46. The draft Regional Transport Strategy (RTS) supports development which reduces journey length, and supports investment which minimises the negative environmental impact of transport, including through improved public transport (T1). In rural areas targeted and innovative schemes are required to reduce car use (T2). The development of regional hubs as the focus of economic activity is supported (T3) in connection with sustainable transport. The use of information technology to provide services which reduce the need to travel is supported. The draft Plan acknowledges the link between economic growth and the growth in car based travel, and seeks to rebalance this in favour of non-car modes (T6). Road charging initiatives are supported along with maximum parking standards as part of a package to enhance access by sustainable modes (T7, T8). All major travel generating developments must have a Travel Plan agreed and implemented by 2011. The Plan identifies the importance of airports but also the need to restrain further development and increase public transport access (T10). The South East region's gateway function means that the efficient movement of freight throughout the region is a key issue. In order to reduce the need for freight to travel by road developments with high freight or other commercial movements should be located close to inter-modal facilities (T12).

- 6.47. A reduction in travel is also supported by policies to provide employment land in locations accessible to existing and proposed labour supply and promote the use of public transport (RE3), and to promote e-services and e-education (RE5). The location of housing is also directed to previously developed land within towns and cities (at least 60% of housing is to be provided on previously developed land between 2006-2026).
- 6.48. The protection, extension and effective management of woodland is supported to help mitigate climate change (NRM5) among other objectives.

### **Adaptation**

- 6.49. Cross cutting policy *CC2 Climate Change* states that the plan's policies promote measures to adapt to the risks and opportunities associated with climate change impacts. These comprise guiding development to locations offering greater protection from impacts, ensuring new and existing building stock is more resilient to climate change impacts, incorporating sustainable drainage and high standards of water efficiency in new and existing buildings and increasing flood storage. Other measures include the development of new water resources and ensuring that options for flood management and migration of habitats are not foreclosed. This cross cutting policy is backed up by *CC3 Resource Use* which seeks the adaptation of new and existing development to reduce resource use, including water, again recognising the need for legislation and fiscal measures alongside development plan policies.
- 6.50. Topic based policies to adapt to climate change impacts include a number relating to water. Policy NRM1 highlights that climate change will impact water availability and quality. In preparing development plans and in making planning decisions LPAs should, among other things, ensure the rate and location of development does not lead to unacceptable water quality and is in step with the planned provision of supply and treatment infrastructure. They should also require development that would use significant quantities of water to reflect current best practice including BREEAM 'very good' and increasingly 'excellent' standards, and where appropriate incorporate sustainable drainage. They should also encourage winter storage reservoirs and other sustainable farming practices. Delivery mechanisms include Building Regulations, water metering and BREEAM standards.
- 6.51. Flooding is the other key climate change issue relating to water, in particular sustainable flood risk management which is addressed in policy NRM3. Local authorities and their partners should also explore ways to improve floodplain management e.g. through woodland planting (NRM5), and promote more integrated coastal zone management (NRM6).
- 6.52. There is recognition that climate change will result in further threats and opportunities for biodiversity, and that further fragmentation will limit its ability to adapt (NRM4), while sustainable land management is needed to protect landscapes, biodiversity and natural resources (C3).

## Implementation

- 6.53. The draft Implementation Plan sets out for most topic based policies, with delivery mechanisms, lead and support roles. More information is to be provided in the final version on the resource implications of implementing the Plan.
- 6.54. The Assembly is also developing a specific *Climate Change Implementation Plan* for action on climate change in the region. A Consultation Draft of the *Climate Change Implementation Plan* was published on August 23<sup>rd</sup> 2005<sup>18</sup>. The Implementation Plan covers both mitigation and adaptation measures, setting out specific actions required to mitigate and adapt to climate change, to implement RSS policies. For each action the Plan identifies the lead and supporting organisations responsible for its implementation.
- 6.55. There are two other relevant implementation plans for climate change policies in the South East Region, both focusing on how to adapt to climate change impacts.
- 6.56. The Three Regions Climate Change Checklist for Development: *Adapting to Climate Change: A Checklist for Development - Guidance on Designing Developments in a Changing Climate*. The Consultation Draft was issued by the Three Regions Climate Change Group comprising representatives from the East of England Sustainable Development Roundtable, London Climate Change Partnership and South East Climate Change Partnership in February 2005. The final version is to be published in Autumn 2005.
- 6.57. As part of their contribution to the European ESPACE project the South East England Regional Assembly and the Environment Agency have published a practitioners' guide to adaptation to water related climate change impacts: the *Climate Change Toolkit. A Toolkit for Delivering Water Management Climate Change Adaptation through the Planning System* (March 2005)<sup>19</sup>.

## DRAFT NORTH WEST RPG

- 6.58. The Partial Review of RPG for the North West (RPG13) Submitted Draft minus Transport Policy Revisions (August 2004), is the latest published regional guidance for the North West. It was withdrawn following an EIP and will be replaced by draft RSS which is currently under preparation. A 'composite' RSS will be published for consultation in October / November 2005, followed by the full Consultation Draft RSS in January 2006. Again, a summary table of draft RPG policies which seek to address or are relevant to climate change can be found at **Appendix 2**.

## Mitigation

- 6.59. The overall strategy of the RPG requires that new development should make the most effective use of land and transport facilities (DP1, DP3), reducing the need to travel and using more sustainable modes of transport. Policy DP5, *Addressing the challenge of climate change*, is an overarching policy with the objective of reducing emissions of greenhouse gases, primarily CO<sub>2</sub>, across all sectors in the region, in line

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<sup>18</sup> Prepared by consultants Collingwood Environmental Planning and Land Use Consultants.

<sup>19</sup> This was prepared for the Environment Agency and SEERA by Land Use Consultants in association with CAG Consultants, Collingwood Environmental Planning and Wilbraham & Co.

- with national targets and referring to the UK target of a 20% reduction in CO<sub>2</sub> from 1990 levels by 2010 rising to 60% by 2050.
- 6.60. The RTS will support the spatial development framework which seeks to guide the sustainable development of the region, particularly in relating to development at regional poles and existing town centres (SD1-8, EC8), by encouraging sustainable modes, providing high quality public transport in urban and rural areas, and providing multi-modal solutions to moving people, goods and services (SD9), including for access to tourist destinations (EC9). The RTS notes that for economic competitiveness an efficient and integrated transport system is needed (TI), with investment in heavy and light rail, bus, coach, walking and cycling. Development of the region's airports is to be sustainable (T5) with improved surface access by sustainable modes of transport.
- 6.61. Urban renaissance policies direct development to derelict land in urban areas to provide quality homes, jobs and community facilities close together, reducing the need to travel (UR1-2). By grouping uses together and providing better infrastructure, including public transport, these policies aim to improve quality of life and social inclusion. UR4 sets targets for recycling land and buildings with a regional target of at least 70% new building on previously developed land from 2002, with sub regional targets which vary from at least 50% (Cheshire and Cumbria) to at least 90% (Liverpool/Manchester/Salford). Policy UR6 seeks to make best use of the existing housing stock.
- 6.62. Policies to support the regional economy highlight the need to locate manufacturing (and other) industry close to skilled labour markets, reducing the need to travel, and to ensure regional investment sites are linked to existing urban infrastructure including well designed public transport (EC4). For example, warehousing and distribution sites should be located to make best use of the regional rail network for freight movements, reducing dependence on roads (EC7).
- 6.63. To achieve more efficient resource management the RPG includes a Framework for Sustainable Energy (Policy ER31) which promotes sustainable modes of energy consumption and production across all sectors in the region, looks to public authorities to lead by example, and refers to the UK wide target of achieving 10% electricity from renewable sources by 2003. It looks to local authorities, energy suppliers, transport providers and others to include policies in their plans and strategies to ensure energy demand is minimised, and unnecessary consumption cut, energy use is as efficient as possible and any continuing use of fossil fuels is as clean as possible. Reference is also made to national emissions reduction targets.
- 6.64. Policy ER14 seeks to improve energy efficiency relating to the use of fossil fuels, including their use in transport, and include a regional target for the promoting and application of CHP (1.5 GW by 2010,). This policy again looks to the public sector for leadership, and states in the supporting text that contractors should where possible exceed Building Regulations requirements, striving for best practice in energy performance, with reference to BREEAM 'excellent' rating as an appropriate benchmark. Local authorities and other public bodies should set targets for reducing their own annual energy consumption. The RPG specifies Home Energy

Conservation, Fuel Poverty Strategies and Best Value Indicators alongside the development and local transport plans as delivery mechanisms.

- 6.65. Policy ER15 supports renewable energy development with a minimum regional target (8.5%) for the proportion of energy to be secured from renewable sources by 2010, to be revised upwards when met. The national target for 2015 is referred to as the next step, followed by an aspiration to achieve 20% by 2020.
- 6.66. Data is to be collected on air and water quality to assist policy development on climate change and greenhouse reduction targets (EQ1-2), while ensuring that development is only located where the necessary sewerage infrastructure can be provided (EQ2).
- 6.67. The RPG includes targets to reduce the amount of waste disposed of to landfill, along with targets to reduce overall waste and increase recycling (EQ6-8).
- 6.68. The RPG also includes targets to increase tree cover (ER6), and to increase urban greenspace, given its potential role in offsetting CO<sub>2</sub> emissions (UR10).

### **Adaptation**

- 6.69. The overarching policy DP5 *Addressing the challenge of climate change* also refers to adaptation, requiring that local planning authorities take into account the implications of climate change for land use, particularly in the coastal zone and locations at risk of flooding. Impacts on biodiversity, water resources, landscapes, industry and business, emergency planning and health strategies should also be acted on by local authorities and their partners (supporting text). Topic based policies seek to develop new approaches to coastal zone management with regional partners (CZ1, CZ2B), apply the precautionary principle and a sequential approach, when considering development in areas at risk of flooding (ER8), require that biodiversity action plans and policies are sufficiently flexible to respond to climate induced stress on vulnerable habitats (ER5), encourage local authorities to identify vulnerable landscapes and develop plans to guide their management (ER2), and encourage the use of new/enhanced urban greenspace networks to enhance or replace habitats (UR10).
- 6.70. The EIP recommended that further consideration be given to effects of climate change in future reviews of the RPG (Recommendation R4.10).

### **Implementation**

- 6.71. The Implementation Plan which accompanies the draft RPG (September 2004) sets out for each policy the implementation / delivery action required, the lead organisation and other potential partners, timescales (if known) and potential delivery vehicles. It is to be updated once the new draft RSS is prepared.
- 6.72. As an example, for policy DP5, *Addressing the challenge of climate change*, the action identified in the Implementation Plan is for local authorities including county councils (the lead organisations) to develop and implement policies and make provision in plans and strategies to contribute towards national targets for reducing greenhouse gas emissions. Potential delivery vehicles are identified as development plans, development control, local and sub-regional policies and strategies, LTPs, the

Greenhouse gas Regional Inventory Project (GRIP), and the UK Climate Impacts Programme (UKCIP). North West GRIP is described by the Environment Agency as the first detailed regional study of greenhouse gas emissions and its application to the North West region is sponsored by the Environment Agency and Tyndell Centre. It is due to be launched in October 2005.

- 6.73. In addition, the North West Regional Assembly has prepared a draft Sustainable Energy Strategy (November 2004). This is an enabling document which aims to stimulate, inform and empower organisations across the region to inspire action and progress in pursuit of objectives to reduce the waste of energy, enable the region to reduce its contribution to climate change, facilitate the transition to sustainable energy, reduce fuel poverty and promote economic opportunities in connection with sustainable energy. The Strategy includes an overview of renewable energy-related planning issues (principally wind), sets out guidance for planning authorities on good practice in planning for renewables, and considers how the planning system can contribute to reducing energy consumption.
- 6.74. Other regional actions on climate change policy include a Defra sponsored climate change scenario modelling project, Regis 2, which predicts the effects of climate change scenarios on land use, biodiversity and water demand for the North West and East Anglia<sup>20</sup>, and the Adaptation Strategies for Climate Change in the Urban Environment (ASCCUE) project based at Manchester University<sup>21</sup>. The North West Development Agency has also commissioned a study on climate change and the visitor economy looking in particular at the coast, upland walking and opportunities for mitigation through green infrastructure<sup>22</sup>.

## COMPARISON OF REGIONAL APPROACHES

### Mitigation

- 6.75. The approach to regional spatial planning in relation to climate change mitigation and adaptation is broadly similar across the North West, South East and Yorkshire and the Humber regions. The focus is on mitigation with reference made as part of the cross cutting climate change policy in each RSS/RPG to the need for local planning authorities to adopt policies to help the region meet the UK's domestic emission reduction targets for CO<sub>2</sub> (a reduction of 20% below 1990 levels by 2010, rising to 60% by 2050). The Yorkshire and Humber RSS and draft South East Plan also refer to a target of reducing CO<sub>2</sub> emissions by 25% below 1990 levels by 2015. The draft South East Plan makes reference to an inventory of greenhouse gas emissions which will be developed in association with the regional climate change partnership and Government and will be used to monitor progress towards the emissions reduction targets.
- 6.76. The focus of the spatial strategies is on reducing the need to travel, particularly by car or lorry, by concentrating development at regional poles, and existing towns, on

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<sup>20</sup> <http://www.silsoe.cranfield.ac.uk/iwe/projects/regis/regis2.htm#outputs>

<sup>21</sup> <http://www.art.man.ac.uk/PLANNING/cure/ASCCUE.htm>

<sup>22</sup> The study is being carried out by the Centre for urban and regional ecology at the University of Manchester and sponsored by NWDA, Defra and the Environment Agency (ongoing) <http://www.snw.org.uk/tourism/>

- previously developed land. A key part of this strategy is to improve local facilities and public transport infrastructure to combat social exclusion. Investment to encourage modal shift in freight movements is identified as a requirement in all regions.
- 6.77. Development in and around regional airports is acknowledged as an important contributor to regional economic growth, but there is recognition that future development must be 'sustainable', i.e. making best use of existing infrastructure wherever possible, (North West, and Yorkshire and Humber) and that development should be 'restrained' (South East Plan), with an emphasis in all plans on improving public transport surface access.
- 6.78. Each RSS/RPG emphasises the need for sustainable resource management, with particular reference to energy, water and materials. The South East Plan includes a regional target to stabilise the region's ecological footprint by 2016 (CC3), which is to be achieved by increasing resource efficiency in new and existing development relating to energy, water and other resources. The South East Plan identifies legislation, fiscal measures and behavioural change by individuals and organisations as mechanisms to achieve improved resource efficiency. The North West looks to local authorities to lead on energy efficiency measures, through planning and other mechanisms such as Home Energy Conservation schemes.
- 6.79. References to best practice in sustainable construction including energy / water efficiency to achieve climate change objectives are strongest in the draft South East Plan, which expects all construction and refurbishment to exceed current Building Regulations standards for energy efficiency, reflecting best practice (BREEAM is provided as an example in supporting text). However, while best practice is expected, adherence to standards is not specifically required. In the North West the emphasis is on best practice, and a specific standard is only referred to in respect of providing an appropriate benchmark for public sector contractors (BREEAM energy efficiency rating of 'excellent').
- 6.80. Each Plan has a policy to increase energy efficiency of new and existing development through development plan policies, and design guidance (alongside national measures). The South East Plan encourages the integration of CHP into large mixed use schemes, Yorkshire and the Humber is working towards the national target of 10GW 'good quality CHP' by 2010 while the North West RPG has a regional target of 1.5 GW by 2010. Each Plan includes a target percentage for the amount of renewable energy to be sourced as part of new development (SE Plan: 10%, NW RPG: 8.5% by 2010 and an aspiration of 20% by 2020; Y&H: 9.4% by 2010 and 22.5% by 2020). The South East Plan and Yorkshire and Humber RSS include regional and sub-regional targets for renewable energy development measured in installed capacity (MW) by 2010 (Y&H) and 2020 (SE). The availability of water and water treatment capacity is recognised as a constraint to development.

## **Adaptation**

- 6.81. Cross cutting policies in all three regions require local planning authorities to plan for climate change impacts. Detailed policies focus on the resilience of buildings to climate change (particularly in the draft South East Plan), environment water resources, water efficiency, coastal zone management and flood risk assessment and

sustainable land management for landscapes, agriculture, other resources and biodiversity. Both the North West and South East include more specific references to climate change impacts in respect of biodiversity, landscape and agriculture than Yorkshire and the Humber RSS. In respect of water efficiency, the South East Plan states that LPAs should require significant users of water to meet BREEAM 'very good' and increasingly 'excellent' (as part of policy NRM1).

### **Implementation Plans**

- 6.82. Each region is seeking to implement climate change policies through an implementation or action plan, whether this is within a sustainable energy umbrella (North West) or specifically for climate change (South East / Yorkshire & Humber).

### **IMPLICATIONS FOR THE YORKSHIRE AND HUMBER RSS**

- 6.83. From this review of the approach to climate change in two other regions, albeit in respect of draft RSS/RPG, the following conclusions can be drawn:
- The broad approach to climate change is the same in each region, using a cross-cutting strategic policy to set out the general requirements for climate change mitigation with reference to the need for local development document policies to help the region meet national targets to reduce carbon emissions. Topic based policies back up the cross-cutting approach.
  - Adaptation is also addressed by strategic and topic based policies.
  - There are precedents for requiring or encouraging best practice in sustainable construction including energy and water efficiency, to higher standards than current Building Regulations through RPG/RSS, either in a policy or as supporting text. However, the main emphasis on specific standards is in the South East; the North West requires 'best practice'.
  - All three regions require progress on CO<sub>2</sub> emissions reductions to be in line with national targets. The draft South East Plan has the same additional emissions reduction target as Yorkshire and the Humber for 2015.
  - Given their inclusion in other regional plans, albeit in draft form, the Regional Assembly Yorkshire and the Humber could also consider requiring or encouraging in the new RSS:
    - embedded renewable energy in larger developments;
    - encouraging the use of best practice standards and sustainable design and construction with particular emphasis on energy efficiency and water conservation (e.g. BREEAM);
    - more emphasis on requiring better resilience to climate change in the built environment as part of sustainable construction;
    - progress towards a regional CHP target.

## 7. THE VIEWS OF STAKEHOLDERS

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- 7.1. The previous section highlighted that there is a considerable degree of expectation being placed on the RSS through both national and regional policy and guidance to deal with climate change issues. In order to understand better how this might be reflected in RSS, a series of interviews were carried out with stakeholders in the region. The main aim of the consultations was to determine what the stakeholders felt the RSS should be trying to do to address climate change issues and, at the local level, the ease of implementation of the approach taken by the current RSS to achieve climate change objectives. The briefing papers provided to stakeholders can be found at **Appendix I**. The written up interviews can be found at **Appendices 6 and 7** along with a summary of the points made at the regional and local level.

### REGIONAL STAKEHOLDER CONSULTATION

- 7.2. The Project Steering Group identified regional stakeholders from nine organisations for interview as part of Stage 2 of the study. Thirteen interviews were carried out with stakeholders from Yorkshire and Humber Assembly, Yorkshire Forward, the regional Climate Change Partnership, the Environment Agency, English Nature, the House Builders Federation, Friends of the Earth, the Government Office, and Yorkshire and Humber Regional Environment Forum. A summary of the key findings is outlined below.

#### Current RSS policies

- 7.3. The majority of stakeholders thought that the policies in the current RSS do not go far enough to address climate change. Although there is a good spread of topics they lack specific detail and support for implementation. Behavioural change is needed, and this is not backed up fully in the RSS. The RSS 'encourages' but should this be taken further to ensure implementation? One stakeholder highlighted that it is essential that the objectives to reduce emissions be properly reflected in all relevant policies of the RSS. There was a perception from one stakeholder that RSS generally focused on adaptation, and that it should be more focused on mitigation. Another stakeholder felt that policies are not integrated enough in the RSS and there was a concern that policies were not being implemented or enforced.
- 7.4. Four stakeholders did, however, feel the RSS went far enough, and that it went further than other regional strategies in addressing climate change within political and national frameworks. Housing was identified as an issue that is difficult to deal with in the RSS, as the majority of emissions come from existing stock, not new housing stock.
- 7.5. Stakeholders generally agreed that the breadth of topics relating to climate change in the RSS was sufficient, but that policies should go further. One stakeholder felt that transport was not adequately addressed. Another felt that the breadth of topics was wide enough, but that it is not clear that all component policy areas relate to climate change.

### **Targets and standards within RSS**

- 7.6. The majority of stakeholders felt that the RSS should contain more specific targets in relation to meeting climate change objectives. Policies need to be expressed in terms of practical actions and associated with clear, measurable targets. Stakeholders by and large felt that developments should be built to more stringent standards in terms of energy efficiency and other means of achieving climate change objectives, but were unsure how far RSS could go in addressing these. One stakeholder, however, highlighted that the job of the RSS is to inform development plans. The stakeholder was unsure if it was for RSS to include more specific requirements.
- 7.7. However, the House Builders Federation felt that it would be difficult to set targets, and questioned the effectiveness of renewable energy targets in particular. More stringent standards than Building Regulations should not be included as these are regularly updated and the main source of emissions is from the existing stock of buildings rather than from new developments. One stakeholder felt that RSS should only require more stringent standards than are currently included in the Building Regulations for development in high flood risk areas.

### **Areas of climate change policy which might be desirable, but difficult to achieve through RSS**

- 7.8. Topics highlighted in the responses to this issue included power generation, changes to existing developments, behavioural change, sea level rise and development around ports, reducing traffic and airport policy. One stakeholder felt that it is difficult to reduce emissions given that everything is driven by economic considerations, and another felt that all aspects of mitigation would be desirable but difficult to achieve, as they are controlled by national legislation.

### **Implementation mechanisms**

- 7.9. One stakeholder suggested that there needed to be a 'catch-all' statement in the RSS about where development takes place, e.g. to reduce the need to travel, as land-use planning is a vital mechanism in implementing climate change policies.
- 7.10. Both behavioural change and funding were highlighted as important tools in mitigating and adapting to climate change. Stakeholders' suggestions to improve implementation of climate change policies included fiscal policies and education, as without them RSS was considered to be powerless.
- 7.11. The perceived conflict between climate change and the growing economy was raised as a key area of concern in terms of implementation, particularly the expansion of air travel to and from the region. It was felt to be difficult to promote climate change policies when they are challenged by the push for economic growth.
- 7.12. One stakeholder felt that some implementation issues were avoided in the RSS, most specifically that the region needed to take a stance on key mechanisms such as renewable energy generation and consumption and improved, affordable public transport. Another suggested that a more detailed review of aviation policy was needed, which should not include the promotion of road surface access to airports.

- 7.13. In relation to responsibility for implementation, one stakeholder felt that regional bodies should not be expected to take the lead on certain policies, as this is the responsibility of the Government. Another felt that policies should be made more spatially specific with clearer responsibilities and meaningful indicators. One stakeholder felt that most policies could be achieved, but that there was a major barrier in the fact that the RSS has unrealistic emission reduction targets. This hinders progress as LPAs often felt that the issue of emission reduction was beyond them and therefore needs to be reviewed as a matter of urgency.
- 7.14. Overall, it was suggested that identifying mechanisms is a question of balance and that it was important to focus on mechanisms that can deliver the most change. Some clarifications were provided and additional mechanisms to those outlined in Annex ii were suggested.

### **Clarity of responsibilities for delivery and the contribution of sectors**

- 7.15. The majority of regional stakeholders felt that responsibilities for delivering RSS policies were not clear enough. A review of whether the right organisations have been identified may be needed, and it is important that these organisations understand their role in reducing emissions and adapting to climate change. It was felt that there is a need for practical actions associated with targets and indicators. A comprehensive implementation plan to set out who should be doing what and when would be useful.
- 7.16. One stakeholder suggested that it would also be useful to quantify how policies would reduce emissions in each sector in order to focus on the key areas. One stakeholder that was interviewed did, however, feel that the responsibilities were clear enough. The challenge is achieving targets.

### **Monitoring mechanisms**

- 7.17. When asked what measures should be put in place to monitor the implementation of RSS policies on climate change, stakeholders suggested that an annual monitoring report on emissions was needed, with indicators set out to achieve goals. It was suggested that additional modelling work should look at the emissions reduction target and identify specific actions by local authority. It was also suggested that local authorities could take more responsibility, but noted that it was vital that local authorities have sufficient understanding of the issues, as well as support from the Assembly and sufficient resources. One stakeholder felt that monitoring should focus on the mechanisms that would bring about most change.

### **Gaps in data for monitoring**

- 7.18. Stakeholders identified gaps in the available data to monitor change in biodiversity, the performance of local authorities with regards to emissions and specific data on emissions from housing, and data on energy and water consumption.
- 7.19. Although there is a lot of data on transport, there are problems associated with how this data is interpreted by different organisations, and agreement between organisations is needed to resolve this issue.

## **LOCAL STAKEHOLDER CONSULTATION**

- 7.20. The steering group identified six local authorities for interview as part of stage 3 of the study. It was decided that interviews would be carried out with two stakeholders from each authority, where appropriate, one involved in producing the Local Development Framework (LDF) and one involved in producing Local Transport Plans (LTPs). A total of ten interviews were carried out with officers from Calderdale Metropolitan Borough Council, Hambleton District Council, Leeds City Council, Kingston Upon Hull City Council, North Yorkshire County Council, Doncaster Metropolitan Borough Council and the South Yorkshire LTP Partnership.
- 7.21. Questions were agreed with the steering group relating to both LDFs and LTPs (see Section 2 of this report). These were put to the stakeholders in telephone interviews lasting approximately half an hour. A summary of the key findings is outlined below.

### **Local contributions to greenhouse gas emissions**

- 7.22. The interviewees were broadly very knowledgeable about the contribution their administrative areas made to greenhouse gas emissions. Contributions highlighted included emissions from transport, landfill, waste incineration, the domestic sector, and industrial processes. Local authorities were, however, generally unsure of quantitative values of emissions from their areas, with the exception of transport emissions for one authority.

### **Local climate change impacts**

- 7.23. The interviewees were also aware of a number of impacts of climate change on their local authority areas. Impacts highlighted included flooding from ground water, sea level rise, subsidence, the increased need for emergency planning, drought, impacts on biodiversity and transport infrastructure and increased storminess. Local authorities identified a number of measures that were being taken to reduce the impacts of climate change. These included raising buildings, investigations into highway and land drainage systems and flood mapping.
- 7.24. Although the interviewees were aware of the impacts of climate change, some felt that due to the uncertainty in the science, particularly at the local level, it was difficult to make predictions about impacts and how to plan for them. One local authority officer raised the issue that there was a debate about whether certain impacts were a result of climate change, or of natural cyclic weather patterns. It was remarked by another officer that it is important to combat climate change as part of a wider network.

### **Complying with RSS policies on climate change when drafting LDFs / LTPs (e.g. policies S5 and S6)**

- 7.25. The interviewees were asked how easy it is to comply with RSS policies on climate change when preparing their Plans and what difficulties they are experiencing.
- 7.26. Interviewees gave varied responses to this question. Two officers felt that it was easy for local authorities to comply with policies when drafting LTPs because they are not very onerous and could easily be ignored. Another interviewee considered that

there is a need for more co-ordination between those working on LTPs to achieve real change.

- 7.27. In terms of difficulties experienced, one interviewee felt that it was difficult to monitor whether local authorities are contributing to reducing emissions. Another interviewee noted that it is possible to control the location of sites, but was unsure how authorities could monitor the operation of these sites after planning permission is granted. It was also noted by an officer that although local authorities can create opportunities, for example, for more sustainable forms of transport, they cannot force people to take these choices.
- 7.28. Two interviewees stated that the SA/SEA process is helping local authorities to comply with RSS policies on climate change.

### **Incorporating the need to reduce the region's contribution to climate change into LDF/LTP**

- 7.29. The interviewees felt that their local authorities were generally attempting to incorporate the need to reduce emissions into their LDFs and LTPs. However, some appeared to be doing much more than others. Ways in which they were reducing emissions included appointing a carbon reduction manager, taking measures to minimise the need to travel, including policies to encourage moving up the waste hierarchy, including a chapter on climate change in the draft LTP and setting indicators and targets for transport to reduce emissions. One interviewee stated that although their authority will be acknowledging the desire to reduce emissions, it will be very difficult to prove and quantify whether they will be effective in achieving this objective. It was also identified that it is difficult to balance sustainability issues and economic growth. The SA/SEA process was identified by two interviewees as a useful process as it had helped in highlighting how the LTP should set targets and indicators. One authority were aiming to address the Transport Shared Priority theme of air quality, rather than climate change.

### **Incorporating the impacts of climate change into LDF/LTP**

- 7.30. The majority of interviewees, both from the transport and planning side, identified ways in which they had taken flood risk into account. One local authority planned to produce Supplementary Planning Documents within their LDF to address issues such as flood risk and sustainable design. Another local authority had not addressed climate change impacts specifically in their LTP, but highlighted that taking account of impacts was a component of the SA/SEA process. Two interviewees stated that their authorities were working with the Environment Agency on flood risk. However, one local authority officer suggested that it was not always easy to develop away from flood risk areas, as these were sometimes very extensive. But where the benefits of development outweighed the flood risk costs they ensured that mitigation measures were put in place.
- 7.31. Additional ways in which local authorities had incorporated climate change impacts into LDFs and LTPs included raising the level of buildings in a park and ride scheme, improving emergency planning, and incorporating sustainable drainage design into a development.

### **Clarity in RSS on how the LDF/LTP should respond to the challenge of reducing greenhouse gas emissions**

- 7.32. Six of the local authority interviewees felt that the RSS was not clear enough in how an LDF/LTP should respond to the challenge of reducing greenhouse gas emissions, three of whom are involved in the LDF process and three who are involved in drafting LTP. The remaining three officers, two involved in preparing LDF and one who worked on a LTP felt that the policy was clear enough. However, almost all interviewees felt that even if the policy itself was clear, it was not clear what local authorities should be doing to achieve emissions reductions. One interviewee felt that there was insufficient co-ordination between regional and local bodies and between sectors.
- 7.33. Interviewees generally wanted more guidance on how to respond to RSS policies on climate change at a local level. However, one officer did not feel that the RSS should not have more specific targets, but that this should be left up to local authorities. Another local authority officer suggested shorter-term targets would be helpful.

### **Clarity in RSS on how the LDF/LTP should respond to the challenge of adapting to the impacts of climate change**

- 7.34. Most interviewees did not feel that the RSS was clear enough on how they should respond to the impacts of climate change. Again, it was felt by many that more specific guidance on how local authorities should tackle the impacts of climate change is needed. One interviewee highlighted the need for more co-ordination. Another felt that there needed to be a continuation of dialogue between regional and sub-regional bodies. When answering questions relating to LDF, one officer stated that the RSS should not specify how local authorities should respond to the impacts of climate change, as the impacts differed between authorities.

### **Monitoring compliance with LDF/LTP policies relating to climate change**

- 7.35. Interviewees identified various methods of monitoring compliance with policies relating to climate change. One stated that their authority would be monitoring through the use of targets and indicators and two others stated that they would be collecting data for their annual monitoring report, which would indicate how effective their policies are. Another authority stated that they would monitor through via the SEA process. However one interviewee felt that monitoring would be very difficult, as they were not yet geared up to do this.
- 7.36. A number of interviewees felt that it was difficult to monitor their authority's contribution to emissions. One stated that data were often needed from private companies, who are sometimes unwilling to supply this data. Another interviewee felt that all authorities in the region should work together to share data and therefore monitor compliance more easily.

### **Gaps in the evidence base**

- 7.37. All but two interviewees felt that there were gaps in the evidence base. These included flood risk assessment, how far local authorities should be going in relation to

climate change policies, uncertainties in UKCIP predictions, the level of impact of climate change, data on minerals and waste and the level of emissions from each sector. One asked how it was possible to know the contribution of each sector to emissions and another felt that there was a need for evidence from the Government linking human activities directly to climate change impacts.

### **The approach in RSS in relation to climate change**

- 7.38. A number of interviewees agreed with the approach in RSS in broad terms, but others identified areas of improvement. One interviewee felt that the challenge was to be more regionally specific and not merely repeat national policy approaches. Another felt that climate change should be taken into account at the very beginning of policy development, and should not be 'retro-fitted' afterwards. Some interviewees felt that more work should be done in terms of climate change policy and that the difficulty was to know how sub-regional bodies should meet the targets set out in the RSS. Another officer felt that local authorities should be left to decide how to address climate change without more specific guidance from RSS.

### **Transport**

- 7.39. Local authority interviewees working on LTPs were asked if and how a number of mechanisms were being incorporated into LTPs, and if so, how they would be enforced.

### ***Modal shift targets***

- 7.40. Of the four local authorities interviewed, all were attempting to increase modal shifts towards more sustainable forms of transport. Three LTPs contained specific targets and indicators relating to modal shift and these were being monitored. The other had a bus strategy and that they encouraged sustainable alternatives supported by demand management measures.

### ***Fleet upgrades***

- 7.41. One of the authorities stated that they incorporated fleet upgrades in their LTPs through their Air Quality Strategy. The remaining three authorities stated that their LTPs did not contain specific policies on fleet upgrades, but two local authorities were working with their own fleets. All vehicles in one urban authority used biodiesel and the authority was looking into driver training to reduce emissions. Another urban authority was encouraging local bus companies to upgrade their fleets, to incorporate newer, greener buses.

### ***Demand management***

- 7.42. Local authorities were addressing demand management through various means. One authority had a toolkit of measures based on demand management. Another is setting the pace for high occupancy vehicle lanes and was the first local authority to use a guided bus system. This urban authority has set targets to improve public transport and will be adopting a range of moderate demand management techniques. The third authority managed demand mainly through parking control. They were not, however, controlling short stay spaces as stringently due to concerns that

people would go elsewhere to shop. The fourth authority identified parking policies and park and ride schemes as tools that they were using to incorporate demand management into their LTP.

### ***Behavioural change***

- 7.43. All four local authorities were attempting to change behaviour through their LTP. One interviewee highlighted parking controls as a way that they were doing this. Another stated that they were developing a strategic county wide marketing plan, a comprehensive travel awareness strategy that draws on marketing principles in order to affect behavioural change. Other ways which local authorities identified of changing behaviour were by providing better alternatives to cars such as improved trains and bus systems and awareness raising campaigns.
- 7.44. Barriers to changing behaviour that were identified included the view that people don't like to be told what to do, that they like their own space and that there was a lack of awareness of climate change. Also that the bus and rail industry were not car competitive. Raising awareness was identified by one local authority as a huge part of changing behaviours.

### ***Green Travel Plans***

- 7.45. The level of commitment to green travel plans varied between local authorities. One authority was doing a lot of work, including a large consultation exercise and an assessment of the effectiveness of travel plans. Another stated that they were encouraging people to make plans, but enforcing them was difficult, whilst another authority identified their strategic county wide marketing plan as the tool they are using.

### ***Congestion charging***

- 7.46. None of the four local authorities were planning on implementing a congestion charge. However, one interviewee highlighted that there were concerns that the local economy would not stand a charge, but that they would consider congestion charging if a regional or national scheme was imposed.

### ***Measures to control climate change impacts of airport expansion (Leeds and Doncaster only)***

- 7.47. One interviewee felt that the objective to improve surface access to airports in the region was likely to conflict with present thoughts on sustainable development, as there is an objective in SA/SEA to reduce CO<sub>2</sub> emissions from transport. Encouraging air travel by improving access appeared to contradict this objective. A master plan for future developments of the area's airport has been written but this is not yet in the public domain.
- 7.48. The other local authority officer interviewed outlined the LTPs support and promotion of better connectivity to the airport, particularly public transport. The officer outlined a number of new bus, coach and train services that had been, or were due to be, opened. Travel plans would be featuring strongly in airport development and raising awareness, along with promotion of alternatives to the

private car would also play an important part in promoting more sustainable modes of transport to the airport.

## **CONCLUSIONS**

- 7.49. The interviews with stakeholders in the region revealed that there is a diversity of opinion about what the RSS should and should not be doing to address climate change issues. The coverage of climate change in RSS policies was felt to be sufficient, but while some felt that the RSS is already doing enough, others felt that it could go further, although they were not generally able to identify how this could be done. The main area of concern appeared to be that the actions, responsibilities, and delivery mechanisms need to be made clearer, so that all stakeholders are fully aware of what they should be doing and how performance can be measured. More co-ordination within the region, better science (to substantiate the need for action), and data to enable performance to be measured was called for.
- 7.50. There were genuine concerns raised by some consultees that there are conflicts between climate change objectives and economic objectives (including airport policy). Also, there was concern that the success of RSS in reducing emissions will only be partial, in that the main target should be to improve the energy efficiency of existing development, rather than new development, as the latter already has to meet prescribed standards through Building Regulations.



## 8. ANALYSIS OF RESEARCH FINDINGS

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### INTRODUCTION

- 8.1. This section provides an analysis of the gaps between what the current RSS provides for in terms of climate change mitigation and adaptation, and what it should or could be doing, informed by the legal and policy review, as well as the approach of other regions and the views of stakeholders. The responsibilities for implementation of RSS policy are also considered, along with how it should be monitored.
- 8.2. Firstly, a summary is provided of:
- The gaps / contradictions in national policy and other barriers to action.
  - Key Regional Issues.
  - The legal parameters for RSS (what RSS *can* do).
  - What national policy requires in terms of the general content of RSS (what RSS *should* do).
  - The role of other regional strategies.
- 8.3. This provides the context for considering the potential parameters for, and inclusion of, policies in the RSS.
- 8.4. Secondly, we consider specifically the issue of climate change in RSS, and compare what the current RSS says with what it should or could say. We address mitigation first followed by adaptation, and examine:
- What national planning policy specifically requires development plan policies (including RSS) to address regarding climate change issues.
  - What other national and regional policies encourage with respect to climate change issues.
  - The approach of the current RSS.
  - The extent to which the current RSS meets national and other policy guidance.
  - Responsibilities for implementation.
  - Data availability for monitoring.
  - Costs of climate change policies.
- 8.5. Ways of overcoming gaps in the approach of the current RSS are suggested in **Section 9, Conclusions and Recommendations.**

## CONTRADICTIONS / GAPS IN NATIONAL POLICY

- 8.6. In this section the potential contradictions and gaps in national policy that are relevant to action on climate change are highlighted, followed by other barriers to action:
- The lack of detailed guidance in national planning policy for using the planning system to mitigate and adapt to climate change, coupled with the delay in the production of the Planning Response to Climate Change (which contains little specific guidance), has resulted in uncertainty and delay in implementing climate change policy.
  - The promotion of development in locations that could increase risk, e.g. in the Sustainable Communities Plan, which would appear to run contrary to Defra and Environment Agency policy on floodplain protection.
  - There is no requirement for Strategic Environmental Assessment or Sustainability Appraisal of national policies which would help to identify conflicts between policy areas.
  - The Building Regulations, which are complementary to the Town and Country Planning System, currently set the standards which built development must meet. Whilst these are being strengthened with respect to energy efficiency, they have some way to go to meet BREEAM 'Excellent' or Ecohomes best practice standards. They also need to take full account of the need to adapt to climate change impacts beyond water efficiency. It is unclear whether they will achieve the 60% reduction in CO<sub>2</sub> by 2050 which is the national target.
  - The Government is sending conflicting signals in relation to transport, a key area for climate change action, which requires Government action to *encourage* individual behaviour change. Funding for investment in major infrastructure is largely in the hands of Government, but it is notoriously difficult for regions to secure the funding required to support the most sustainable solutions, particularly with respect to transport. For example, road improvements are often easier and quicker to deliver than major improvements to rail infrastructure. Policies which promote air travel through airport expansion also send a conflicting message, given the increasing contribution of aviation to carbon emissions.
- 8.7. By far the majority of energy is consumed by existing development, rather than new development. The RSS includes policy guidance to local authorities to improve the energy efficiency of existing buildings, but the measures available to local authorities are largely constrained to publicly owned buildings or rely on the goodwill and voluntary action by private owners.
- 8.8. Despite the work of the UK Climate Impacts Programme there remain uncertainties among the public, businesses and local authorities about the impacts of climate change in any given location, and perceptions about the costs involved are a key barrier to action on adaptation. As a result there is a lack of incentive amongst both developers and local planning authorities to include adaptation measures in development projects, when other priorities are higher up the agenda.

## REGIONAL ISSUES

- 8.9. From the previous sections it can be seen that there are both considerable requirements and also encouragement of the RSS through national and regional policy, guidance and strategies to deal with both the mitigation and adaptation aspects of climate change. This raises a number of issues at the regional level:
- The perceived potential conflict between regional economic regeneration objectives and achievement of climate change objectives.
  - Whether the RSS should go beyond national standards for building construction.
  - The issue of aviation development.
  - Potential difficulties associated with the inclusion of regional emissions targets in RSS which are unlikely to be met by the RSS alone, and / or due to constraints of legislation.
- 8.10. The key regional concerns and pressures in relation to climate change are the potential and perceived conflicts between regeneration and attracting investment on the one hand, and taking action to reduce emissions and adapt to climate change impacts on the other. The region is expected to accommodate significant new development while taking account of flood risk and water resource issues, and protecting other natural resources.
- 8.11. The RES concludes that *taking action now on climate change is not uneconomic due to the benefits in financial savings and market advantage*. These would result from reduced resource use (including energy, materials and travel), acting to increase resilience to climate change impacts to reduce future costs due to e.g. flood damage, and ensure businesses are ready to cope with other impacts, e.g. higher temperatures, and taking advantage of green economy opportunities (see also paras. 8.92 - 8.115 below).
- 8.12. A key question considered was whether the RSS should go beyond national standards for building construction. We concluded that the RSS could not *require* standards which go beyond Building Regulations, unless there is a good regional argument to do so, e.g. in respect of areas at high risk of flooding within existing settlements, where development is needed for social and economic reasons. RSS could, however, *encourage* developers to go further than the minimum national standards where this is feasible, with reference to best practice such as BREEAM and Ecohomes. This position is aided by the recent changes to improve the energy efficiency standards required.
- 8.13. Excluding international flights (which are not included in current emissions data), transport is the fastest growing source of emissions in the region despite having the second highest use of public transport in England (excluding London) and is working to offset any gains in industrial energy efficiency (RES 2003-12, Annual Monitoring Report, 2004). Aviation development in the region is also growing with the opening of Robin Hood Airport, and will clearly contribute to this increase in emissions.

- 8.14. The role of the region in power generation skews its contribution to national emissions, and is an area which the RSS is unable to influence. However, the development of renewable energy generation (and other low carbon generation) is a key policy objective which is reflected in the RSS, and could be promoted further.
- 8.15. There are therefore a number of issues and conflicts which together impact on the ability of the region to reduce emissions targets. Indeed, there are concerns that the 2010 target will not be met, both nationally<sup>23</sup>, and within the region<sup>24</sup>. The additional 'intermediate' target for 2015 of a 25% would also appear to be in doubt. There is concern that these targets are acting as a barrier to action on climate change in some parts of the region, due to uncertainties over how they were identified at the regional level, and in the ability of the region to meet them (Stakeholder consultation). This reflects, in particular, the region's higher than average representation of the power generation industry, which is its largest contributor (by far) to regional greenhouse gas emissions.
- 8.16. In terms of climate change adaptation, a key issue in the region is the need to regenerate existing towns and cities which lie within floodplains – this involves allowing development to go ahead in higher flood risk areas for social and economic reasons. Helped by the publication of the regional Planning for Flood Risk Manual and the promotion of strategic flood risk assessments at local authority level the number of consents granted contrary to Environment Agency advice on flood risk grounds has dropped from 27 in 2002/3 to 14 in 2003/4, a significant improvement<sup>25</sup>.
- 8.17. It may not be possible to resolve the inherent tensions within RSS, such as the need to provide for additional development and the ability of the region to meet its greenhouse gas emission targets.
- 8.18. It may therefore be necessary to re-examine the evidence base for the regional targets included within the RSS to ensure that these do not act as a deterrent to action, but rather as an achievable challenge.
- 8.19. A combination of actions at the regional level and by lobbying Government should also help to make a difference. These are explored further in the **Section 9**.

## THE LEGAL PARAMETERS FOR RSS

- 8.20. The legal review found that the parameters for lawful-making of RSS are drawn widely, and that provided that a climate change policy relates to the region (or part of it), and the use of land, then any rational policy can be lawful (see **Section 4**, p.21). RSS may include policies that can impact upon land use but which are not capable of being delivered solely through the grant or refusal of planning permission, so long as such policies are rational and are capable of implementation.
- 8.21. The legal review also advised that there would need to be good reasons to depart from national policy and standards. Should the region wish to go down this route,

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<sup>23</sup> Securing the future: UK Government Sustainable Development Strategy, 2005.

<sup>24</sup> Regional Greenhouse Gases Emissions Monitoring and Modelling, Cambridge Econometrics, 2002; Climate Change Action Plan for Yorkshire and the Humber, Regional Climate Change Partnership, Consultation Draft 2005.

<sup>25</sup> Regional Spatial Strategy for Yorkshire and Humber Annual Monitoring Report (2004).

there would be a risk that the Assembly may not be able to defend such an approach in the RSS, unless there are specific and rational reasons why the region (or part of it) should depart from national policy or seek higher standards than those set nationally (e.g. areas behind existing flood defences, as provided for in PPG25, 2001, para. 69). However, there would be less difficulty in including a policy which requires a 'best practice' approach, and *encourages* the use of standards.

- 8.22. Many of the most effective mechanisms that deal with climate change, in particular mitigation, require behavioural change. However, the ability of the RSS, in legal terms, to bring about behavioural change is limited, since it will often depend upon incentives and sanctions outside the scope of what the RSS can legally require through the planning system, depending instead on other regimes (e.g. national fiscal policy).

## **THE ROLE AND CONTENT OF RSS**

- 8.23. The primary purpose of the RSS is to bring together and integrate policies for the development and the use of land in the region with other policies and programmes which influence the nature of places and how they function (see **Section 5**, p.33). This needs to be undertaken within an overall spatial vision for the region together with a strategy for achieving this vision.
- 8.24. The RSS, therefore, provides a spatial expression of the direction in which the region intends to go. It should include a spatial vision for the region, showing how this will contribute to achieving sustainable development issues, and provide a spatial strategy for achieving the spatial vision.
- 8.25. The RSS (which should include the Regional Transport Strategy) should be consistent and provide support for other regional frameworks and strategies, and be regionally and locationally specific in applying national policies to the circumstances of the region. It should focus on delivery mechanisms, and make clear what is to be done by whom and by when. It should provide a clear link between policies objectives and priorities, targets and indicators.
- 8.26. Only policies which can be implemented through the granting of planning permission can form the framework for decisions under the Planning & Compulsory Act 2004. However, the RSS need not be restricted to policies that can be implemented through the grant of planning permission. It can include other policies that, whilst not part of the framework for making decisions on planning applications, can nonetheless be a material consideration in decision-making. This means that the RSS needs to be clear whether its policies are:
- Strategic development control policies which are to be implemented directly through the grant or refusal of planning permission (i.e. referred to directly by local planning authorities in making decisions on planning applications).
  - To be delivered through LDDs or LTPs, as local planning authorities see fit, so long as they are compliant with the RSS policy.

- To be delivered through other means of delivery as agreed with the bodies concerned.

8.27. As set out in PPS11 (para. 1.7), the RSS should not:

- Repeat national policies.
- Address local issues which should be the subject of a Local Development Document.
- Identify specific sites as suitable for development.

## THE ROLE OF OTHER KEY STRATEGIES

8.28. PPS11 notes that it is essential that RSS both shapes and is informed by other regional strategies, particularly the Regional Sustainable Development Framework, as the spatial expression of the vision for the future development of the region. The roles of the other regional strategies were briefly outlined in **Section 5** and those most relevant to the RSS are listed below:

- **Advancing Together**, 2004 sits above the other regional strategies: it sets the framework and draws together the region's plans and strategies, includes a practical means to assess the sustainability of strategies and plans and identifies indicators for measuring progress in the region (reported as 'Progress in the Region').
- The **Regional Sustainable Development Framework**, 2003-5 (RSDF) promotes ways of achieving economic growth alongside environmental and social benefits. With 'Advancing Together,' it is the starting point for preparing RSS. It is reinforced by the **Regional Environmental Enhancement Strategy** (2003).
- The **Regional Economic Strategy**, 2003-12 (RES) is the only strategy other than RSS to have statutory status. It provides a plan for regional economic growth setting out how this will be achieved and is complemented by the Government's **Northern Way** growth strategy (2004).
- The purpose of the **Regional Housing Strategy**, 2005 (RHS) is to influence the creation and management of housing and neighbourhoods in the region, with the goal of creating sustainable communities.

## ADDRESSING CLIMATE CHANGE MITIGATION IN RSS

8.29. As set out in **Section 3**, the main contributions to climate change in the Yorkshire & Humber region have been identified as the power generation industry (58% in 2001), the transport sector (13%), and the domestic sector (10%). Other sectors

contributing greenhouse gas emissions include industry, commerce, agriculture, waste, health and education, and construction<sup>26</sup>.

- 8.30. Trends show that, during the period 1990 to 2001, greenhouse gas emissions declined in most sectors. The main exception was road transport, which experienced an increase of 17%, despite more fuel efficient cars. The decline in greenhouse gas emissions in other sectors can be put down to a re-structuring of the economy from manufacturing to office-based commerce, cleaner and more efficient technologies, and a switch in energy generation from coal to gas. A considerable proportion of the power generation was to provide energy to other regions, and so somewhat distorts the figures for Yorkshire & Humber.
- 8.31. The Government has set a national target for a reduction in CO<sub>2</sub> emissions from current levels of 60% by 2050, and a national target for the proportion of energy generated from renewable sources of 10% by 2010 (Energy White Paper, 2003).
- 8.32. In considering the role of the RSS in helping the region to achieve its greenhouse gas emissions targets, it is important for it to be set within the context of wider societal forces. These have the potential to undermine what the RSS is able to do, and include the following:
- Greenhouse gas emissions tend to increase with growth in the economy and consumption, notwithstanding improvements in technologies that increase the efficient use of fossil fuels and reduce the amount of emissions. There is only a limited amount that the RSS can do about this.
  - By far the majority of greenhouse gas emissions are the result of existing development and travel movements, but the RSS can only materially influence new development, which is already built to higher energy efficient standards.
  - The RSS can generally only encourage more sustainable and energy efficient lifestyles to be pursued by those living, working and visiting the region. For example, it can offer opportunities for people to live closer to where they work, but it cannot force them to do so.
  - Much energy consumption, at least by households and individuals, is determined by individual behaviour, which in itself is influenced by a range of factors. Whilst standards (e.g. with respect to energy efficient appliances and materials) can be set, issues such as the price of energy and the attractiveness of the choice of a more energy efficient lifestyle are likely to be much more significant. The most obvious example of this is the use of the car over public transport, walking and cycling.

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<sup>26</sup> **Sources:** Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Cambridge Econometrics, November 2002.

Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Update of Baseline Data, Cambridge Econometrics, November 2003.

Climate Change Action Plan for Yorkshire and the Humber, Consultation Draft, January 2003.

- Some of the major contributions to greenhouse gas emissions in the region, such as the choice of fuel by power stations, and aircraft movements, are largely outside of the control of RSS.
- 8.33. In addition, the current RSS was adopted in December 2004. It has therefore had only eight months to be reflected in LDDs, and in the consideration of planning applications. This is not enough time for it to have had any significant effect on development in the region. Given this context, we consider below what contribution the current RSS aims to provide, and what more potentially it should or could do.

### **What does national planning policy require?**

- 8.34. Planning Policy Statement I (PPSI) requires that development plans address the causes of climate change through policies which:
- Reduce energy use;
  - Reduce emissions (for example, by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight); and
  - Promote the development of renewable energy resources.
- 8.35. The RSS should be in line with Government sustainable development targets (PPSI I). Transport is a particular target sector for reducing energy use and greenhouse gas emissions in national planning guidance, which states that:
- Development plans should encourage patterns of development which reduce the need to travel by private car by concentrating development in towns and cities, or reduce the impact of moving freight (PPSI, PPG3, PPG13).
  - The RTS must be informed by Government aims to increase accessibility and improve public transport (PPSI I).
  - The RTS should provide (PPSI I, PPG13):
    - Regional objectives for transport investment and management across all modes.
    - A strategic steer on the future development of airports, ports and inland waterways, with targets to increase the proportion of journeys to airports made by public transport.
    - Guidance on priorities for managing and improving the road network.
    - Advice on the promoting of sustainable freight distribution.
    - A strategic framework for public transport that identifies ways to improve accessibility to jobs and key services, expands travel choice, improves access for those without a car and guides the location of new development.
    - Advice on parking sub-regional parking policies.

- Guidance on strategic context for local demand management measures.
- 8.36. RSS can also contribute to a reduction in energy use through the location, design and construction of the built environment to achieve the prudent use of natural resources as part of sustainable development. The use of materials which take less energy to produce (e.g. recycled / secondary aggregates) and sustainable waste management should also result in energy savings and reduced greenhouse gas emissions:
- Development plan policies should seek to minimise the need to consume new resources by making more efficient use or reuse of existing resources. Design policies should include objectives that ensure developments make efficient and prudent use of resources (PPS1).
  - Regional planning authorities should promote resource and energy efficient buildings, community heat schemes, the use of combined heat and power (PPS1).
- 8.37. The third main target for climate change mitigation in national planning policy is to promote renewable energy. PPS22 provides the key guidance:
- RSSs should contain policies to promote and encourage development of renewable energy resources, recognising a range of resources, characteristics, locational requirements and potential, and identifying criteria against which planning applications should be assessed.
  - The RSS should include regional renewable energy capacity target (derived from assessments of region's potential, taking into account impacts). This should be expressed as minimum amount of installed capacity for renewable energy in the region (MW), and where possible by sub-region. 2010 and 2020 targets are required, with monitoring, review and upward revisions on a regular basis.
  - RSSs should also contain an indication of output expected from offshore renewables.
- 8.38. Beyond the above, national planning policy guidance provides little other advice on mitigation measures.
- 8.39. In summary, it is clear that the Government expects development plans, including RSS, to address the causes and impacts of climate change through policies which reduce energy use, reduce emissions, promote renewable energy and take climate change impacts into account in the location and design of development (PPS1). It sees reducing the need to travel and encouraging sustainable modes of transport through spatial planning and the Regional Transport Strategy as key ways in which the RSS should seek to achieve climate change objectives (PPS11, PPG3, PPG13). However, the ability of RSS to achieve significant change is limited by its remit.
- 8.40. The RSS has only a limited influence on the ability of the region to meet its greenhouse gas emission targets, both due to its spatial planning role being concentrated towards new development, and due to wider national policy and societal factors that tend to drive in the opposite direction to that needed to mitigate and adapt to climate change.

8.41. Combined with the conflicts identified above, there is therefore a considerable amount of tension regarding the expectations being placed on RSS to grapple with climate change issues by both Government and regional stakeholders, and the ability of the RSS to deal with these issues in legal terms, due to the role of the RSS as a spatial plan, and its limited direct influence on behavioural change.

### **What do other national and regional policy, guidance and strategies encourage?**

8.42. Apart from planning policy, the other main guidance issued by Government with respect to mitigation is 'The Planning Response to Climate Change' (ODPM, 2004), as discussed in **Section 5**. This sets out detailed advice on the role of planning, and a range of issues by topic. It includes guidance on the issues to consider when assessing new developments, and how the guidance should be implemented. It brings together the messages from planning policy and reinforces these with more practical guidance. For example, it makes reference to:

- The need for RSS to include policies which encourage LPAs to include policies in their LDDs on sustainable building design (e.g. building fabric, built form, landscaping, renewable energy, etc.), backed up by design guidance.

8.43. Key messages within the guidance for regional planning bodies that go beyond national planning policy relate to:

- The promotion of local supply networks, including rural diversification and local food markets and sourcing.

8.44. In relation to energy use, the RSS must put in place policies to contribute towards the targets set out in the Energy White Paper (2003) (a 20% reduction in carbon dioxide emissions from 1990 levels by 2010, and the ambition to cut emissions of greenhouse gases by 60% by around 2050). More than half of emissions reductions are expected to come from energy efficiency measures. The Government, in the longer term, wants to see more bodies taking a pro-active role and going beyond their statutory functions.

8.45. The Aviation White Paper (2003) acknowledges that the main responsibility for reducing emissions lies with Government and the international community. However, surface access improvements should be taken into account by regional bodies, and at the local level, the amount and location of future airport capacity must properly reflect environmental concerns.

8.46. The majority of regional strategies provide further support and encouragement for the RSS to deal with mitigating climate change, but add little in the way of new considerations. Specific issues that warrant additional consideration include:

- The link between action on climate change and better economic returns should be highlighted in RSS (RES 2003-12).
- Shared high quality design and environmental standards for all development receiving public sector support (draft RES 2006-15), and specification of low carbon emission housing and sustainable construction (RHS 2003-5).

- Reducing methane emissions from agriculture, landfill and mining (RSDF, 2005).
- A bolder approach to sustainable communities to meet greenhouse gas emissions targets could include more stringent targets to allow Yorkshire & Humber to lead the way (Moving Forward: The Northern Way, 2004).
- Planning and spatial policies need to explore the potential to limit greenhouse gas emissions from aircraft by linking permissions for new flights from the region to increased fuel efficiency and emissions reductions from aircraft (Progress in the Region, 2005).
- Proactive policy interventions such as measures to reduce road fuel usage and improve housing stock energy efficiency (Progress in the Region, 2005).

### **What is the approach of the current RSS?**

- 8.47. The approach to mitigation in the current RSS is set by Policy S5, which seeks to reduce the region's greenhouse gas emissions by at least 20% below 1990 levels by 2010 (i.e. the same as the national target) and by at least 25% below 1990 levels by 2015.
- 8.48. The principal policy mechanisms for achieving this target are through:
- Urban and rural design (Policy S4), which requires that sub-regional or local design guides (or supplementary elements within other design guides/plans) address energy efficiency and demand reduction in all development.
  - The sustainable use of resources (S6) including energy through energy efficient best practice measures in design, layout and orientation of development types and to maximise passive solar gain, and by providing for design guides to foster and support such actions.
  - Spatial strategy (P1 & P3) which focuses on reducing the need to travel through the location of new development.
  - Transport (T1-T11), focussing on modal-shift, improving accessibility by public transport, and reducing the need to travel.
  - Housing (H2) which sets out a sequential approach to allocating and development of housing sites, including targets for building on previously developed land.
  - Resource management (R4-R10, R12), in terms of increasing renewable energy generation to achieve carbon reduction (with sub-regional targets as part of R12) and increasing sustainable forms of waste management and disposal.
  - The built and natural environment (N1, N4), for example, an increase in woodlands could act as a carbon sink and as a biomass source for renewable energy.
- 8.49. Additional policies which aim to reduce climate change in terms of mitigation are associated with the economy (E2 & E4) and social infrastructure (SOC1-SOC4).

8.50. **Table 8.1** places each of these policies into the categories of type of policy as defined in PPS11.

**Table 8.1: Types of mitigation policy in the current RSS according to PPS11 policy categories**

Policy	Strategic development control policies	To be delivered through LDDs or LTPs	To be delivered through other means
S4 – Urban and rural design		✓	✓
S5 - Climate change		✓	✓
S6 – Sustainable use of resources		✓	✓
P1- Strategic patterns of development		✓	✓
P3 – Review of existing commitments		✓	
E2 – Rural employment opportunities		✓	✓
E4 – Employment site selection and criteria		✓	
H2 – Sequential approach to the allocation of housing land		✓	
T1 – Land use and transport integration	✓ (RTS)	✓	
T2 – Public transport accessibility	✓ (RTS)	✓	
T3 – Personal transport		✓	
T4 – Freight transport		✓	
T5 – Regional demand management strategy	✓ (RTS)	✓	
T6 – Transport in main urban areas		✓	✓
T7 – Transport in rural areas and market and coalfield towns		✓	
T8 – Tourism-related transport measures		✓	
T9 – Improvements to the highway network		✓	✓
T10 – Airports		✓	
T11 – Transport investment and management priorities		✓	✓
SOC1 – Health		✓	✓
SOC2 – Education		✓	
SOC3 – Retail and leisure facilities	✓	✓	
SOC4 – Open space, sport and recreation		✓	✓
N1 – Biodiversity		✓	✓
N4 – Forestry		✓	✓
R4 – Mineral extraction		✓	
R5 – Waste management strategies / principles		✓	✓
R6 – Sub regional targets for municipal waste		✓	✓
R7 – Density of public recycling facility provision		✓	✓

Policy	Strategic development control policies	To be delivered through LDDs or LTPs	To be delivered through other means
R8 - Recyclates		✓	✓
R9 – Waste management facilities		✓	✓
R10 – Energy from waste	✓	✓	✓
R12 – Energy generation, transmission and supply		✓	

8.51. **Table 8.1** shows that most policies in the current RSS relevant to mitigation are expected to be delivered through local authority development plans, LTPs, and other strategies and programmes. There are very few policies in RSS that could be considered to be strategic development control policies. This means that the current RSS provides more a framework for delivery and policy development, rather than directly controlling development itself. This is to be expected given the role and scope of the RSS, and its hybrid nature in being prepared as its role was changing through the reform of the planning system. However, it also means that there is less certainty about how RSS policies may be delivered through other mechanisms, and where the onus of responsibility lies.

### The approach of the current RSS to monitoring mitigation

8.52. In terms of monitoring RSS policy implementation PPS11 states that:

*“In order to help focus on the key actions that are necessary to deliver the strategy, wherever practicable and sensible to do so, policies should be quantified and output targets and indicators set. Output targets should be set to specify a scale of change in a specified time period. The selection of indicators, which should be kept to a minimum, should follow after objectives, policies and targets have been defined...Contextual indicators should also be monitored. These are indicators that measure changes in the wider socio-economic and environmental regional context against which the RSS is being implemented” (Paras. 3.4-3.5).*

8.53. The thrust of the RSS is to deliver better integration between housing, jobs, services and facilities, and reducing the need to travel. Many of the indicators within the RSS therefore aim to measure whether or not this is being achieved (see **Section 6**).

8.54. Indicators that relate specifically to **greenhouse gas emissions and energy** are set out below.

- **Policy S5 – Climate change:**

Indicator: Total greenhouse gas emissions from the region.

Target: Reduce by at least 20% below 1990 levels by 2010 and by at least 25% below 1990 levels by 2015.

Indicator: Total greenhouse gas emissions from the following sectors – transport, industry, domestic (no target).

- **Policy S6 – Sustainable use of physical resources:**

Indicator: Thermal and water efficiency of the housing stock (no target).

Indicator: Resource demand efficiency of transport (no target).

Indicator: Effective waste management (no target).

Indicator: Resource supply efficiency in construction and demolition (no target).

Indicator: Electricity generated from renewable sources in the region expressed as installed capacity, % of total electricity generated in the region, % of total electricity consumed in the region.

Targets for renewable energy include: Sub-regional targets for installed MW of renewable energy including off-shore wind, and a target that at least 9.4% of electricity consumed in the region is from renewable sources by 2010 and at least 22.5% by 2020.

- 8.55. Transport targets are also set out in **Section 6**. Regional targets address accessibility standards, parking, and accessibility to regional airports by public transport (Target: increase from 3% to 20% by 2106). The RTS also refers to national targets relating to congestion, the number of bus passenger journeys, cycling trips, light rail journeys and the percentage of households within ten minutes of an hourly or better bus service.
- 8.56. In terms of **spatial planning**, there are targets to reduce the percentage of development plan allocations outside urban areas and the percentage of development plans informed by up to date urban capacity studies. The regional target for housing on brownfield sites is to provide at least 60% of housing development in the region on previously developed land for the period 1998-2016, with provisional targets for each strategic planning area set out in Table H1 (ranging from 49-80%).
- 8.57. The RSS Annual Monitoring Report (2004) identifies that while carbon emissions have dropped in the industrial and domestic sectors they have grown in the transport sector. The Report states that RSS needs to reflect and respond to this issue. While meeting its overall regional target (at least 60% housing to be developed on previously developed), which it could consider increasing (see for example, the targets in the draft North West RPG), there is wide variation within the region and the RSS needs to improve performance in this area. The report notes that Regional Assembly should also consider whether it can do more, either itself or with partners, to improve the energy efficiency ratings of homes. Regional renewable energy capacity must be increased to achieve objectives in this sector. Finally, while progress is being made on waste recycling, the monitoring report notes that overall waste is increasing across the region.
- 8.58. The ODPM's core output indicators for RSS<sup>27</sup> are designed to complement those collected to monitor LDDs, to ensure cost effective monitoring. The indicators

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<sup>27</sup> Core Output Indicators for Regional Planning, ODPM, March 2005.

relate to business development, housing (including the percentage on previously developed land, and at different densities), transport (percentage of non-residential development complying with RTS car parking standards), regional services (retail, office and leisure development in town centres), minerals (including production of secondary / recycled aggregates), waste, flood protection and water quality (number of permissions granted contrary to Environment Agency advice on these grounds), biodiversity (changes in areas and populations), and renewable energy (amount of installed capacity by type). Most are to be measured by local authority area.

- 8.59. Most of the ODPM core output indicators are addressed in the current RSS, including all those relating to climate change mitigation.

### **The extent to which the current RSS meet national and other policy guidance**

- 8.60. Our analysis found that there is little in national planning policy guidance with respect to climate change mitigation that the current RSS does not address – **there are no major policy gaps** (see **Appendix 8**).
- 8.61. Beyond national planning policy, our analysis of what other national, regional policy, guidance and strategies say, the approach of other regions, and stakeholder feedback has identified the following gaps in current RSS relating to climate change mitigation:
- A clear explanation of how the component policies work together towards the region's climate change objectives (Stakeholder consultation).
  - The need for shared high quality design and environmental standards for all development receiving public sector support (Draft RES 2006-15).
  - Reference to the use of BREEAM, Ecohomes, and Zero Emissions Standards (ODPM Planning Response to Climate Change, 2004).
  - The promotion of local supply networks, including rural diversification and local food markets and sourcing (ODPM Planning Response to Climate Change, 2004).
  - The need to reduce methane emissions from agriculture, landfill and mining (RSDF, 2003-5).
  - Exploration of the potential to limit greenhouse gas emissions from aircraft by linking permissions for new flights from the region to increased fuel efficiency and emissions reductions from aircraft (Progress in the Region, 2005).
  - Consider with partners proactive policy interventions such as measures to reduce road fuel usage and improve housing stock energy efficiency (Progress in the Region, 2005).
  - There are no regional targets for energy efficiency, CHP or traffic reduction (see **Section 5** of this study).
- 8.62. There are also some internal tensions within RSS that means that it will make it more difficult for the region to achieve its greenhouse gas emission targets. These include:

- The scale of growth – increased development within the region is highly likely to lead to increased consumption of resources, including energy. Whilst the RSS includes policies that aim to ensure that new development is more energy efficient, it is unlikely that these will be able to offset the increased energy and other consumption associated with new development, such as in embodied energy from construction materials.
- Whilst the RTS appears to keep road improvements to a minimum (e.g. through Policies P3 and T9), it is unlikely that the road improvements that are included will lead to a reduction in travel movements, which is what will be required if the emissions from transport are to be reduced.
- Although Policy T11 (and Table 7.4) prioritises demand management and public transport as Tier 1, it is likely that, due to funding arrangements, policies that focus on road improvements (e.g. the motorway improvements) could be easier to deliver, despite being Tier 2. These are likely to lead to an increase in traffic movements, and hence greenhouse gas emissions.
- Policy T10 on Airports is in line with national policy, in that it aims to be compatible with national policy on airport development. However, it also includes a provision that aims to contribute towards an overall strategy of achieving better access for the people and businesses of Yorkshire & Humber to the full range of types of airport facility and services, including international long-haul opportunities. Although aircraft emissions are not included in the regional greenhouse gas emissions statistics, it is likely that this policy approach will contribute to increasing emissions from this transport mode.
- There are no policies within the RSS that aim specifically to favour the development of less-energy intensive sectors of the economy, although the emphasis on high value added and science and technology, together with the restructuring of the economy away from manufacturing, means that this is likely to happen in any event.
- There is some uncertainty about the science on the ability of tree planting to act as carbon sinks. While trees store carbon as they grow, once wood decays carbon is released back into the atmosphere. It is therefore particularly important to prolong the useful life of wood and wood products, e.g. through recycling. Carbon sequestration is a way of ‘buying time’ while longer term carbon reduction solutions are developed<sup>28</sup>.
- Energy from waste is often criticised by environmental groups as not being a source of renewable energy. The Environment Agency concurs with this view. While some energy from waste schemes are eligible to be classified as renewable energy under the Renewables Obligation, these do not include mixed waste incineration or co-firing<sup>29</sup>.

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<sup>28</sup> The value of trees in our changing region. A strategic framework for trees, woods and forests in Yorkshire and Humber, 2005.

<sup>29</sup> [www.dti.gov.uk/renewables/policy/eligible\\_renewables.shtml](http://www.dti.gov.uk/renewables/policy/eligible_renewables.shtml)

## ADDRESSING CLIMATE CHANGE ADAPTATION IN RSS

8.63. **Section 3** identified that the impacts of climate change in Yorkshire & Humber are likely to be wide-ranging. Impacts identified include rising sea levels, increased flooding, pressure on water resources, changing agricultural landscapes, habitats and species distribution, and impacts on property, industry and infrastructure from effects such as increased subsidence, and risk of storm damage. In many cases these impacts are likely to be locationally specific, such as the urban heat island effect in cities such as Leeds, Bradford, York, Sheffield and Hull, water shortage problems in the Lower Derwent and Doncaster/Selby sandstone aquifer, and the increased risk of flooding in the Vale of York, in the Humber estuary, and due to urban drainage problems in Leeds, Sheffield and Bradford.

### What does national planning policy require?

8.64. National planning policy requires that development plans should include policies that:

- Take climate change impacts into account in the location and design of development (PPSI and PPSI I).
- Take into account the potential impact of the environment on proposed developments by avoiding new development in areas at risk of flooding and sea-level rise, and as far as possible, by accommodating natural hazards and the impacts of climate change (PPSI).
- Promote the sustainable use of water resources and the use of sustainable drainage systems in the management of runoff (PPSI)
- Address, on the basis of sound science, the causes and impacts of climate change, the management of natural pollution and natural hazards, the safeguarding of natural resources, and the minimisation of impacts from the management and use of resources (PPSI).
- Take account of flood risk, how it might be affected by climate change, and its potential impacts, when drawing up regional development strategies, recognising the regional significance of coastal and river floodplains using a sequential risk based approach to locating new development (PPG25).
- Identify principal areas at risk from flooding. Inappropriate development should be discouraged in these areas and the remaining flood risk managed sustainably, by using the precautionary principle and a sequential approach to allocating development. RSS should ensure run-off is managed locally (PPG25).
- Take into account the impacts of climate change on the distribution of habitats and species, geomorphological process and features (PPS9).

8.65. Addressing the impacts of climate change is therefore clearly a role for RSS, whether this relates to flood risk and water resources policies, or ensuring built development and urban environments are more resilient to impacts of climate change (PPSI and PPSI I).

### **What do other national and regional policy, guidance and strategies encourage?**

- 8.66. In addition to those issues raised above, the key references to the need for RSS to consider the need to adapt to climate change impacts can be found in the ODPM's 'Planning Response to Climate Change' (2004), which advises that the RSS / RPB should:
- Avoid policies which constrain or reduce effectiveness of future adaptation options (e.g. building in floodplain, which could prevent effective flood management in the future).
  - Set the framework for local authority maps of flood risk and unstable land areas.
  - Collaborate with public utilities and transport infrastructure providers to consider appropriate standards and criteria for siting infrastructure developments.
  - Promote a holistic approach to flood management incorporating managed retreat of coastal defences and restoration of floodplain, and set objectives to protect and enhance coastal resources under climate change conditions.
  - Is advised to adopt the precautionary principle in formulating policies which allow for change and uncertainty in supply and promote water efficient development
  - Is advised to consider impacts of climate change on water resources when carrying out SAs of RSS.
  - Set objectives to protect and enhance landscapes and biodiversity under climate change conditions.
  - Ensure agriculture can respond and is protected from climate change impacts through RSS.
  - With the RES and RSDF ensure that the regional economy, including the environmental economy and agriculture, is not undermined by climate change impacts, and exploits positive opportunities.
- 8.67. The current and draft Regional Economic Strategy (2003-12; 2006-15) and the draft regional Climate Change Action Plan (2005) stress that the positive link between action on climate change and better economic returns should be highlighted in RSS.
- 8.68. The RSS should also seek to reduce habitat fragmentation to enable habitats and wildlife to adapt to climate change (Advancing Together).

### **What is the approach of the current RSS?**

- 8.69. Policy S5 sets the approach to adaptation in the current RSS, which states that:
- “Local and regional authorities and agencies and others should: ... b) Take into account the land use implications of the predicted impacts of climate change on their area and plan for*

*both the successful adaptation to the resulting effects and maximisation of potential economic and social opportunities in land use terms.”*

8.70. The RSS also includes policies on the following three topics to help adapt to climate change:

- Integrated coastal zone and flood risk management (RI-2).
- Sustainable water use and conservation (S6 and R3).
- Halt and reverse habitat fragmentation (NI).

8.71. **Table 8.2** places each of these policies into the categories of type of policy as defined in PPS I I. As with climate change mitigation, the RSS expects most climate change adaptation policies to be delivered through local authority development plans, LTPs, and other strategies and programmes.

**Table 8.2: Types of adaptation policy in the current RSS according to PPS I I policy categories**

Policy	Strategic development control policies	To be delivered through LDDs or LTPs	To be delivered through other means
S5 - Climate change		✓	✓
S6 – Sustainable use of resources		✓	✓
NI – Biodiversity		✓	✓
RI – Integrated coastal zone management of the East Coast and Humber Estuary		✓	✓
R2 – Development and Flood Risk	✓	✓	✓
R3 – Water resources and drainage		✓	✓

**The approach of the current RSS to monitoring adaptation**

8.72. The indicators in current RSS to measure progress on implementing policies with respect to climate change adaptation are set out below:

- S5 – Climate change: no indicators or targets for adaptation
- S6 – Sustainable use of resources:

Indicator: Thermal and water efficiency of housing stock (no target).

- NI – Biodiversity

Indicator: loss or damage to priority habitats identified in the Regional Biodiversity Audit including sites of importance at the international and national level.

Target: zero loss to priority habitats.

Indicator: Loss or damage to habitats protected by local biodiversity designations. (no target)

- R1 – Integrated coastal zone management of the East Coast and Humber Estuary

Indicator: Area/length of coast covered by Integrated Coastal Management Plans (no target)

- R2 – Development and Flood Risk

Indicator: Number of planning applications permitted contrary to the advice of EA where the objection was made on flood defence grounds (no target).

- R3 – Water resources and drainage

Indicator: Number of developments incorporating sustainable urban drainage systems or water conservation measures (no target)

- 8.73. The only adaptation related core output indicator in the ODPM guidance<sup>30</sup> relates to flood protection and water quality, and measures the number of permissions granted contrary to Environment Agency advice on these grounds.

### **The extent to which the current RSS meets national and other policy guidance**

- 8.74. The RSS reflects the requirements of national planning policy to adapt to climate change through land use planning: **there are no major policy omissions**. There is a clear strategic policy (S5) which requires local planning authorities and others to take into account the 'land use implications' of climate change impacts and plan accordingly for successful adaptation to the effects, including any economic and social opportunities.
- 8.75. The key regional impacts of climate change: sea level rise and flooding are addressed comprehensively, including links to climate change in the supporting text to policies R1 and R2, and the production of a 'planning and flood risk manual' by the Regional Assembly.
- 8.76. Water resources, sustainable drainage and reducing habitat fragmentation are also addressed but without direct references to climate change, other than in the supporting text to S5.
- 8.77. Although there are no major policy omissions relating to climate change adaptation, our analysis has identified the following **gaps** in the approach of the current RSS:
- Planning and designing urban environments, landscaping and buildings to adapt to climate change and address climate change resilience issues (e.g. resilience to flooding, increasing temperatures and drought, storminess) is not referred to in RSS as part of policies on sustainable building design, S4 and S6 (PPSI, Planning Response to Climate Change, 2004).

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<sup>30</sup> <sup>30</sup> Core Output Indicators for Regional Planning, ODPM, March 2005.

- The need to plan for and adapt to impacts of climate change on infrastructure, particularly in relation to transport, is not addressed in RSS (Planning Response to Climate Change, 2004).
- The RSS does not address the need to adapt to climate change by key regional economic sector e.g. power generation, transport, domestic, other industry, public sector etc. (Draft Climate Change Action Plan, 2005).
- There is no direct reference in the RSS to the links between policies to support the economy and address climate change, nor to the impact of climate change on the economy, whether positive or negative (Planning Response to Climate Change). This is however highlighted in the current and draft Regional Economic Strategy (2003-12 and 2006-15).
- Opportunities to expand tourism (to take advantage of positive climate change impacts) are not referred to in the RSS (Planning Response to Climate Change, 2004).
- There are no obvious gaps in RSS policy on water efficiency and water resources, but climate change is not specifically mentioned in relation to these issues, either in the policies or supporting text (except implicitly in the supporting text to S5) (Planning Response to Climate Change, 2004).
- With respect to agriculture there is no reference to the need to adapt to climate change in the RSS (Planning Response to Climate Change, 2004), although Policy R3 does encourage on-farm winter storage reservoirs.
- The RSS does not include any reference to the effects of climate change on biodiversity, except implicitly in the supporting text to S5, though it does focus on the need to reduce fragmentation (PPS9, Planning Response to Climate Change, Advancing Together, RSS Annual Monitoring Report 2004).
- The RSS does not reflect the potential benefits of trees and woodland in relation to climate change through flood and water management, and the benefits to town and city centre micro-climates (Strategic Framework for Trees, Woods and Forests and Outline Action Plan, RSS Annual Monitoring Report 2004).
- While there are indicators in RSS for most adaptation policies, there are no *targets* for policies relating to the coastal zone, flooding and water resources policies, and no indicator or target for biodiversity except in respect of loss or damage to habitats. This will not measure progress towards reducing habitat fragmentation except where this involves a negative impact on a priority habitat. There are also gaps where there is no existing policy on an aspect of adaptation – e.g. resilience of urban environments (see **Section 5** of this report).

## IMPLEMENTATION

- 8.78. One of the most frequent comments in the interviews with regional and local stakeholders was that the actions and responsibilities in RSS need to be made much clearer (see **Section 7**, p.61). The current RSS does identify responsible bodies, or

groups of organisations for each policy (see **Appendix I, Annex iii** for more details), but consultees nevertheless identified a need for further detail. This will partly be solved by *the requirement in PPSI I to prepare an Implementation Plan and to define whether each policy is:*

- (i) a strategic development control policy,
- (ii) to be delivered through LDF/LTP policies, or
- (iii) to be implemented by other bodies.

8.79. However, the Assembly and its regional partners should consider providing **guidance** to local authorities on specific ways that they could implement climate change mitigation and adaptation measures, and how to measure how successful these are. The form of such guidance should be agreed with the local authorities within the region (e.g. workshops, guidance document, signposting to information sources etc.), and may be best managed through the Regional Climate Change Action Plan.

8.80. PPSI I states that:

*“In preparing the draft revision to RSS, the RPB should demonstrate how it is intended that the spatial strategy will be implemented. Appropriate implementation mechanisms should be identified along with the organisations responsible for delivering policies...An agreed implementation plan is necessary to set out for each policy and priority proposal which organisation(s) are responsible for delivery, along with the current status of the proposal...and the timescale for the key actions to deliver the policy, including any output targets” (paras 3.1-3.2).*

8.81. In terms of implementation, the key delivery mechanisms will be:

- The development control function of LPAs with reference to RSS strategic development control policies and policies within LDDs.
- The implementation of LTP policies.
- The actions of delivery agencies, such as the Regional Development Agency, Water Utilities, Highways Agency and Strategic Rail Authority.

8.82. When identifying bodies responsible for implementation, the RSS should provide clarity about the roles that such bodies are expected to play, for example, when identifying which ‘other partners in the development process’ (SOC3) or ‘other public agencies’ (Policies S3 and S4) are expected to have a role in implementing sustainable development policies.

8.83. Where local authorities or other agencies are expected to play more than one role in implementing policy this should be clearly stated. For example, their role as a local planning authority in preparing the LDF will be informed by their corporate role in developing community strategies and promoting energy efficiency of existing properties, leading through example by adopting a travel plan, promoting sustainable energy, and supporting travel wise and waste recycling schemes. This need for clarity is particularly relevant to Policy S5, in order to maximise progress.

8.84. When considering implementation, it is important to note the role of the RSS and its relationship with other strategies and delivery mechanisms, as explored in **Sections 4 and 5**. While we have considered above the ways in which the RSS itself could go further than its current approach towards regional climate change objectives, this section looks at the role of other regional strategies and organisations in helping to meet those objectives.

### **Mitigation**

8.85. A range of implementation bodies and mechanisms should be brought to bear in providing direction and support for what the RSS (and the Climate Change Action Plan) is aiming to achieve. While not exhaustive, examples include:

- **Energy efficiency** – Policies S5, S6 (LPAs, RDA, energy companies, developers, housing, health and education sectors). The Regional Economic Strategy has a specific role to play in complementing the RSS. For example, the RES could provide support for energy efficiency in economic development in general, and consider whether the region should encourage energy (and other resource) efficient economic sectors and discourage energy-intensive ones. The Housing Strategy has a role in promoting energy-efficiency in both new and existing housing development, particularly where it is publicly owned.
- **Transport** – Policies 71 – 711 (Local authorities, Highways Agency, Strategic Rail Authority, freight industry, transport service providers). The main implementation mechanisms are the RTS and LTPs, but service agreements in which local authorities have an influence will also assist. The RES could also provide support for locating economic development where it is in line with the RSS aim of reducing the need to travel.
- **Renewable energy** – Policies S6, R12 (LPAs, RDA, energy companies, English Nature, Countryside Agency). The RES can encourage the development of the renewable energy sector in the region. The regional Sustainable Development Framework could provide support and guidance for renewable energy production, and in particular grapple with some of the tensions between landscape, biodiversity and renewable energy schemes. The sustainable energy guidance for North Yorkshire could be rolled out to other sub regions.
- **Waste** – Policies R5 – R10 (County and unitary authorities, LPAs, Environment Agency, waste industry). The Regional Waste Strategy can help to set out how waste should be managed in the region to promote the waste hierarchy and proximity principle.

### **Adaptation**

8.86. Examples of adaptation implementation and support mechanisms for the RSS are provided below:

- **Coastal zone management and flood risk** – Policies S5, S6, R1, R2 (Environment Agency, local authorities (planning and corporate), farmers and land managers). Strategic Flood Risk Assessment and Shoreline Management Plans will

be key mechanisms for ensuring that development does not experience increased flood risk, and that changes to the coastline arising from the effects of climate change can be accommodated. Land managers have a role to play in the provision of flood storage.

- **Water resources / water conservation** – Policies S5, S6, R3 (Environment Agency, LPAs, and water companies, RDA). Water resource plans provide the main determinant of where investment in water infrastructure will go. Water efficiency in development projects can also be promoted through funding and development control. River Basin Management Plans will address water quality issues.
- **Biodiversity / reducing habitat fragmentation** – Policy NI (LPAs, Defra, Countryside Agency, English Nature, National Trust, farmers and other land owners). The Environment Strategy has a key role to play in identifying where habitat fragmentation needs to be reversed, and how adaptation to allow for changes in species distribution should occur. LDD allocations and development control, and land management bodies also have a role to play.
- **Resilience in the built environment** – Policy S5, S6 (LPAs, RDA, developers, health and education authorities). Development control will be the key mechanism, assisted by design guidance to integrate climate change adaptation measures with sustainable construction and design advice.
- **Resilience in transport infrastructure** – Policy S5 (LPAs, RDA, Highways Agency, Strategic Rail Authority). The RTS should provide a regional steer, with LTPs providing local advice.

## DATA AVAILABILITY FOR MONITORING

- 8.87. The RSS twin-track approach to action on climate change mitigation and adaptation needs to be properly backed up by indicators and targets to measure progress against each policy, where possible.
- 8.88. Of course, one of the key difficulties in monitoring policy performance is the availability of suitable data, and this impacts on whether it is sensible for the RSS to include indicators and targets for each policy.
- 8.89. Our consultations with regional stakeholders identified significant uncertainty as to how to measure progress towards climate change policy objectives.
- 8.90. All but two of the local authorities consulted felt that there were gaps in the evidence base for monitoring performance in implementing climate change policies. Consultees identified gaps in the availability of data to measure the performance of local authority areas with regards to carbon emissions, specific data on emissions from transport and housing, and data on energy and water consumption. In particular, it was felt to be very difficult to measure whether policies are contributing to a reduction (or increase) in emissions. Other gaps related to information on flood risk assessment and data on minerals and waste.
- 8.91. The Regional Assembly **should** therefore explore ways of ensuring data is available to monitor progress against climate change objectives with its regional and local

partners, ensure transport data is consistently used across the region, and **consider providing guidance** to local planning authorities on how to measure progress towards mitigation and adaptation policy objectives.

## **COSTS OF MITIGATING AND ADAPTING TO CLIMATE CHANGE**

- 8.92. Uncertainties and perceptions around the costs of mitigating and adapting to climate change can act as a barrier to implementing measures to achieve climate change objectives, and was highlighted as an issue during the stakeholder consultation exercise.
- 8.93. In this section we provide signposts to existing studies/evidence on the potential economic and opportunity costs of the types of measures associated with regional policy encouraging or prescribing environmentally sustainable development. This could include policies seeking increased energy efficiency, a requirement to incorporate renewable energy into new development and to promote stand-alone renewable energy development.
- 8.94. The key concern in the Yorkshire and the Humber region is that requiring higher, or different, environmental standards in association with climate change policies may increase the costs of development, deterring investment and regeneration.
- 8.95. However, in addition to considering the direct monetary and economic costs of mitigating and adapting to climate change, it is important to also consider opportunity costs, including the cost of *not* taking action.
- 8.96. Economic and financial costs (and savings) associated with **mitigating** climate change through reduced emissions will be associated with
- reducing energy use (e.g. by travelling less or by more sustainable modes, and through energy efficiency measures).
  - improving energy efficiency (e.g. through building layout, design, materials, insulation, appliances etc).
  - incorporating renewable energy into new developments (e.g. solar panels).
  - renewable energy generation (e.g. windfarms, hydro, biomass).
- 8.97. These are likely to affect the whole region, particularly when considering how to reduce energy use and improve efficiency although there may be variations, e.g. renewable energy costs may vary across the region depending on the types of scheme involved.
- 8.98. Key regional impacts of climate change which will involve consideration of costs issues in deciding on **adaptation** measures will include:
- Flood risk: fluvial (e.g. Vale of York), intra-urban – where heavy downpours overwhelm urban drainage systems (e.g. Leeds, Sheffield), groundwater and coastal.

- Coastal erosion risk (from sea level risk and possible increases in storminess)
- Water supply issues (e.g. Lower Derwent, Doncaster/Selby sandstone aquifer)
- Subsidence (especially on clay soils)
- Higher temperatures/heat-island effects (Leeds, Bradford, Hull, Sheffield)
- Emergency planning (particularly in flood risk areas)

8.99. Economic, social and environmental costs of *not* adapting to climate change include:

- Damage to properties (commercial, domestic and public sector) and infrastructure (e.g. ports, railways, roads)
- Costs to businesses (damage to stock, loss of trade, etc.)
- Costs to human health through direct injury and loss of life e.g. from floods/extreme high temperatures, and indirectly through stress from subsidence, flooding etc.
- Social costs to communities of loss of access to services e.g. following a flood event.

8.100. We have identified a number of key sources that discuss the costs associated with climate change mitigation and adaptation. Using a topic based approach, these sources are outlined below, along with a brief summary of what the sources include. We concentrate on financial and economic costs, but the other costs associated with acting (or not) on climate change should not be forgotten, as highlighted above.

### **General and Energy Issues**

#### ***Costing the impacts of climate change in the UK – Overview of guidelines, UK Climate Change Impacts Programme, June 2004.***

8.101. This report provides a methodology that allows businesses to cost climate change impacts. It is the first such methodology in the UK and is aimed specifically at the business audience. The methodology outlined in the report aims to ‘enable decision-makers to calculate valid, order of magnitude estimates of the costs, to help identify priority climate risks and to select appropriate adaptation measures.’ The steps in the methodology involve identifying and measuring climate impacts in physical units, converting these units into monetary values, calculating the resource costs of adaptation options and weighing up costs and benefits of adaptation options. The report also includes four case studies that demonstrate how the methodology can be used to derive cost estimates for selected climate change impacts.

#### ***Adapting to Climate Change: A checklist for development. Three Regions climate change Group. Consultation Draft, February 2005.***

8.102. This document includes a business case for adapting to climate change. This outlines a number of opportunities and risks presented by climate change (page 9). Financial opportunities of adapting to climate change include lower long term running costs,

including insurance, and, where finance is needed from long-term investors, taking a long-term view at the design stage makes financial sense. The document also discusses market differentiation opportunities. These include the opportunities to position the organisation as market leader on 'climate proofing' buildings and gaining a competitive edge over competitors.

- 8.103. The risks to businesses of not adapting to climate change are also highlighted in the document. These risks include the possibility that, by failing to adapt to climate change, developments will prove too expensive to run or will become uncomfortable to live or work in. Additional risks highlighted in the document are associated with changes in building regulations, reputation risks, increased weather risks, delaying action and loss of productivity.

***Climate Change Action Plan for Yorkshire and the Humber. Consultation Draft, January 2005.***

- 8.104. Section 6 of the Climate Change Action Plan contains a table which broadly outlines which actions associated with mitigating for and adapting to climate change will be possible within existing budgets, which are likely to require a new budget without significant funding and which will definitely need significant new funding. Those actions which the plan has identified as requiring significant funding are working with regional and national bodies to identify new evidence or information to assist decision making, and evaluating the success of mechanisms to reduce emissions from medium-large regional businesses.

***Regional Economic Strategy (RES) for Yorkshire and Humber 2006-2015. Consultation Draft July 2005***

- 8.105. The Draft RES discusses the economic benefits of adapting to climate change. 'Action to address (global warming) is not inherently uneconomical. In many ways, efficient use of transport, energy and natural resources can aid business competitiveness, as well as minimising waste and pollution. The businesses that act first have the potential to win 'first mover' advantages and enhance their market position. This includes competitiveness through energy and resource efficiency and taking advantage of economic and employment potential of a 'low carbon economy' (page 73). The RES also states that businesses can save 10% - 20% of utility costs through simple energy saving management and low cost measures (para. 3.78).
- 8.106. In addition to the benefits and savings outlined above, the RES highlights the potential savings resulting from locating businesses in close proximity to each other, which would both reduce emissions from transport and lower transport costs.

**Renewable Energy and Sustainability Standards**

***Costs and Benefits of Sustainable Solutions to Community Planning and Development. A study for the Countryside Agency. BioRegional Consulting Ltd, January 2005.***

- 8.107. This study outlines overall costing estimates of reducing carbon emissions from buildings. The study focuses on reducing and optimising energy demand, meeting

optimised demand from zero or low carbon and renewable resources and providing shared energy infrastructure at the community/neighbourhood level. The study also highlights costs and savings associated with sustainable waste, transport, buildings, food, and water use (e.g. annual savings of fitting water efficient appliances), and outlines quantitative monetary costs and benefits.

- 8.108. The study highlights key findings in relation to renewable energy use and sustainable buildings, in addition to those themes outlined above. For example, initial capital costs are identified for solar water heating costs (from £1600 per dwelling), micro-wind turbines (from £900 per dwelling) and photovoltaic panels (from £2000 per dwelling). The study also highlights the costs associated with Community Heating and shared energy infrastructure of very high environmental specifications (zero carbon).
- 8.109. The cost and benefits of building to sustainability standards are also addressed. Additional costs of building to 'achievable' sustainability standards (Ecohomes 'Very Good') range from 0.5% to 2.5%. Additional costs of building to 'aspirational' standards (Ecohomes Excellent) range from 2.5% to 6.5%. However, the study notes that these costs can be offset by planning gain and lifetime savings will result, especially if occupants' economic productivity gains are taken into account.

### **Storm, Flooding, Drought and Subsidence**

#### ***Measuring Progress. Preparing for climate change through the UK Climate Impacts Programme. UKCIP Technical Report, July 2005.***

- 8.110. This document considers the cost of climate change impacts in the form of two case studies; storm-related transport disruption in Scotland and maintenance on Heritage Gardens. The Scotland case study examines the costs of a single storm in 1999 in Scotland, which caused disruption to trains and delays to passengers. The estimated total cost of time lost across Scotland as a result of the storm was around £71,000. When the costing method was applied to all storms in Scotland in 1999 the resulting time costs were approximately £600,000.
- 8.111. The Heritage Gardens study calculates the costs of lawn management and pest and disease control incurred during the summer of 2003, and estimates these costs under the UKCIP02 Low and High Emissions scenarios for the future. Calculations show that by the 2080s, maintenance costs could increase by 80% compared to current cost levels. The document also briefly discusses the UKCIP costings report (Metroeconomica, 2004) which provides a method for calculating the cost of climate impacts.

#### ***Climate change and local communities – How prepared are you? An adaptation guide for local authorities in the UK, UKCIP, July 2003.***

- 8.112. This document provides advice to local communities on the impacts of climate change and associated adaptation methods. The document also includes predictions and research findings from a variety of sources on the costs of climate change in the future. For example, insured losses resulting from the floods of autumn 2000 in England and Wales were about £700m and a research report suggests that if no

allowance is made for climate change, damage from river flooding could increase by half and coastal flooding by four times. This would equate to an extra £1.1 billion in annual damages by 2075.

- 8.113. Additional research on climate change costs highlighted in the document relates to subsidence following summer droughts. Over the past 30 years these have been steadily increasing and accounted for £3.3 billion of insurance claims over the 1990s. A recent study concluded that whilst climate proofing new buildings in southern England against subsidence would cost approximately £32 million, damage claims could cost £200 - £400 million annually if no action is taken.

### **Conclusions**

- 8.114. This brief review of research into the costs associated with acting to mitigate climate change along with some costs which will result from not taking action does not pretend to be comprehensive. It can be seen, however, that the costs associated with not taking action on climate change, in terms of reducing future impacts through mitigation, or adapting to the impacts we are already experiencing, are likely to be high, whether this is measured in financial, economic, environmental and human terms. The impact of flooding has been shown to have a particularly high financial and economic cost.
- 8.115. The business case for acting now, to save utility costs by reducing energy use, and increasing efficiency in energy and other resource use is well made by the Regional Economic Strategy, along with a strong argument related to market advantage. This should form the basis for action by businesses in the region. The use of sustainability standards in new homes and other development does have a financial cost implication, but it appears that this would be off-set by lifetime savings in energy and other costs, including gains in economic productivity, along with the ability to provide comfortable buildings in hotter temperatures, and resilience to flooding etc., all of which could attract a premium in the private housing and business market.



## 9. CONCLUSIONS AND RECOMMENDATIONS

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### CONCLUSIONS

- 9.1. Our legal review identified that provided policies in the RSS relate to spatial planning, are rational and capable of implementation they should withstand legal challenge. There are risks associated with *requiring* development to go beyond national standards, e.g. Building Regulations, but fewer associated with *encouraging* this route. It would be entirely reasonable therefore for an RSS not to go beyond Building Regulations unless there are good reasons, relating to regional circumstances, to suggest it should do so.
- 9.2. Our analysis of the national planning policy context found that the RSS for Yorkshire and the Humber is by and large in line with national planning policy on climate change, although it could do more to highlight the need for climate change adaptation in the urban environment.
- 9.3. Despite the good policy coverage in RSS recent regional studies have shown that the emissions reductions targets are unlikely to be met. However, this is largely due to forces beyond the control of the RSS, such as the choice of fuel by power stations and individual behaviour and lifestyles.
- 9.4. We have nevertheless identified a number of areas in which the RSS should or could be more assertive to give the region the best chance of meeting the emissions reduction targets and of adapting to climate change impacts. These relate to those areas where the RSS has most influence, that is spatial planning, transport, the design of the built environment, coastal and flood risk management and the protection of the natural environment (see below).

### RECOMMENDATIONS

- 9.5. We give most emphasis to the requirements and guidance provided in national planning policy and the key regional strategies most relevant to RSS, in identifying where we consider the Assembly **should** consider going further than the current RSS. Where issues are less clear cut and have less weight afforded to them in national and regional policy and strategies, they are described as matters where the Assembly **could** consider taking action over and above the approach in the current RSS.
- 9.6. Where recommendations refer to matters addressed in national planning policy these should be considered by the YHA in terms of the particular circumstances experienced in the region in relation to climate change mitigation and adaptation. The YHA should consider how these policies should be applied to the region, including their spatial expression with reference to particular locations or regional issues, and the nature of places and their form and function (PPSI I).

## What RSS could or should say in relation to mitigation

9.7. While the current RSS is addressing the key climate change mitigation issues and meeting the requirements of national planning policy, we have identified the following areas where the Regional Assembly could consider going further than the current RSS in response to the gaps identified above, or in response to other issues raised during the study:

- The RSS **should** clearly explain how its component policies work together towards the strategic climate change objectives set out in Policy S5 (Stakeholder consultation), both within the RSS and in the Annual Monitoring Report, and **should** consider providing **guidance** to Local Authorities on how to meet these objectives (Stakeholder consultation), e.g. through the Climate Change Action Plan.
- As the 2010 CO<sub>2</sub> reduction target is unlikely to be met, both nationally<sup>31</sup>, and within the region<sup>32</sup>, the YHA **should** consider reviewing the evidence base for these regional targets, and in particular whether it is reasonable to retain them in the RSS, or whether they should be recast to exclude sectors over which the RSS has little influence (e.g. the power generation sector). Monitoring the inclusion of policies at the local level to work towards these targets would be an additional approach to consider.
- While the RSS has no influence over the operation of existing power stations it should nevertheless work to encourage reductions in emissions of other sectors. In seeking to reduce carbon emissions the RSS **should** therefore focus on those sectors that are currently the major contributors to greenhouse gas emissions in the region *and* relate closest to its spatial planning role. The most important of these is transport since emissions continue to rise from this sector (Cambridge Econometrics, 2003; Climate Change Action Plan, 2005). Other sectors where the RSS has a role to play are in the energy efficiency of built development, in the domestic, industrial, commercial and public sectors, both in construction and operation (PPS1, Energy White Paper, 2003). In addition, the RSS has a key role to play in reducing and recovery of waste (PPS1, Planning Response to Climate Change 2004).
- The YHA **should** also review policies relevant to climate change mitigation to determine whether there is any way that further mitigation measures could be introduced. Policy T10 currently includes a target of 20% for travel to the regions' airports by public transport by 2016, which while working from a current base of 3%, would appear challenging, but would merit review nonetheless to see if there is any further scope to press airport operators for further improvements. In addition, the RTS **should** include regional traffic reduction targets, which would help to

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<sup>31</sup> Securing the future: UK Government Sustainable Development Strategy, 2005.

<sup>32</sup> Regional Greenhouse Gases Emissions Monitoring and Modelling, Cambridge Econometrics, 2002; Climate Change Action Plan for Yorkshire and the Humber, Regional Climate Change Partnership, Consultation Draft 2005.

provide guidance to local planning authorities who are required to define such targets (unless it is considered inappropriate to do so) under the Road Traffic Reduction (National Targets) Act 1998.

- The RSS **should** continue to place great emphasis within the spatial strategy on the importance of making the urban areas within the region more attractive places in which to live and work, and in which to live sustainable lifestyles. This means delivering jobs, shops, services and facilities within easy walking and cycling distance, and making the use of public transport much more attractive than the use of the car. It also means increasing the rate of development of brownfield land (reviewing the sub regional and regional targets), and improving the quality of the living environments within the urban areas, including the provision of attractive open space and the public realm, and the quality of the services and facilities they provide, so that people choose to live in the urban areas, rather than travelling in from elsewhere. This is central to the role of the RSS in contributing to reductions in carbon emissions (PPS1, PPS11, PPG13, PPG3).
- The RSS **could** also be even more assertive in the way it addresses demand management measures such as area road user charging in order to discourage people from using their cars (RTS Guidance<sup>33</sup>), and to support the aim of encouraging people to live closer to where they work.
- The YHA **could** consider exploring with local authorities and transport operators ways to reduce road fuel use (Progress in the Region, 2005), for example linking the development of freight distribution facilities to fleet upgrades. The promotion of local supply networks, including rural diversification and local food markets and sourcing **should** also be encouraged to reduce the need to travel (ODPM Planning Response to Climate Change, 2004).
- The Regional Assembly **should** consider whether different approaches to mitigation are required for different sub-regions (PPS11). For example, for those parts of the region that are in need of regeneration, a more flexible approach or less demanding standards might be considered, so long as the overall contribution to regional targets are being met, and that the region as a whole remains on course to reduce greenhouse gas emissions. Similarly, different ways of meeting renewable energy targets may be appropriate depending on the nature of the sub-region concerned (e.g. CHP, community renewables, and solar power may be particularly appropriate for urban areas, whereas large scale wind energy schemes, hydropower and biomass are often more suited to rural areas and the coast).
- The Assembly **should** consider rolling out the emerging renewable energy guidance for North Yorkshire to the rest of the region to provide

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<sup>33</sup> Regional Spatial Strategies: Guide to Producing Regional Transport Strategies, Consultation Draft, DfT 2005.

a more positive planning framework for renewable energy development (PPS22, 2004). The inclusion of a regional target for CHP **should** be considered.

- The RSS **should** consider being even more proactive with respect to the delivery of renewable energy capacity as part of new developments (embedded renewable energy). For example, it **could** provide renewable energy targets for LPAs and include a requirement for local planning authorities to include a 'Merton' style policy that specifies the amount of energy that would be expected to be derived from renewable sources with respect to different types and scale of development, based on the circumstances (e.g. renewable capacity) of each authority and strategic development location.
- The RSS **should** encourage all new development to meet BREEAM 'good' or 'excellent' standards (as in the draft South East Plan). The use of such standards is encouraged in the ODPM's guidance 'Planning Response to Climate Change, 2004'. While there are legal and political factors which weigh against requiring this approach, a policy which *requires* best practice and *encourages* the use of standards (e.g. BREEAM) would be less of a concern in legal terms. The example of public sector development, including improvement in the energy efficiency of housing stock, should be used to encourage others (as in the North West draft RPG, and Draft RES 2006-15), along with the Sustainable Building Code for Government funded housing, to be implemented from April 2006.
- The Assembly **should** explore ways to reduce emissions of methane from agriculture, landfill and mining (RSDF, 2003-5) with its local authority and industry partners.
- The RSS **could** include more in the way of 'strategic development control' policies, which are used directly in the decision-making process with respect to planning applications, to give greater certainty that such policies will be applied consistently across the region. In order to do so, such policies must be confined to matters of genuine regional and, where appropriate, sub-regional importance, and they must strike the right balance between providing a clear strategic framework and avoiding unnecessary or inappropriate detail (PPS11).

### **What RSS could or should way in relation to adaptation**

- 9.8. As with mitigation, we give most emphasis to the requirements and guidance provided in national planning policy and the key regional strategies most relevant to RSS in identifying where we consider the Assembly **should** consider going further than the current RSS. Where issues are less clear cut and have less weight afforded to them in national and regional policy and strategies, they are described as matters where the Assembly **could** consider taking action.

- The RSS **should** clearly explain how policies which work towards climate change objectives fit together, especially as part of the Annual Monitoring Report (Stakeholder consultation).
- The Assembly **should** consider providing guidance to local authorities on how to work towards the objectives of Policy S5 in relation to adaptation (particularly in relation to non-flooding issues), and on how to measure progress (Stakeholder consultation).
- The Assembly **should** consider identifying more indicators and in particular targets relating to adaptation measures (PPSI I, 2004), such as the implementation of urban environment adaptation measures to improve resilience to flooding, water shortages, increased temperatures etc, according to local circumstances.
- The RSS **should** highlight the impacts of climate change on key policy areas more specifically, including where *multiple benefits* will accrue from adaptation measures. For example, opportunities for enhancing biodiversity and making improvements to the amenity of the public realm, through sustainable drainage systems and tree planting. (RES 2003-12, Planning Response to Climate Change 2004, Stakeholder consultation).
- RSS **should** clearly communicate that climate change adaptation is a part of sustainable construction. For example, in designing the urban environment and new or converted buildings, adaptation to climate change impacts of increased flooding and higher temperatures (among others) should be integrated with measures for optimum solar gain, energy efficiency and lifetime design (PPSI, 2005; Planning Response to Climate Change, 2004, PPG25, 2001).
- The RSS **should** reflect the need to adapt to climate change and address climate change resilience issues (e.g. resilience to flooding, increasing temperatures and drought, storminess) when planning and designing urban environments, landscaping and buildings, as part of policies on sustainable design (S4 and S6) (PPSI, 2005; Planning Response to Climate Change, 2004)
- When identifying the need to provide regional transport and other infrastructure, the RSS **should** ensure it is located and designed to take account of climate change impacts in conjunction with neighbouring regions (Planning Response to Climate Change, 2004).
- The RSS **should** include a policy or supporting text which recognises the need for regional economic sectors to adapt to climate change impacts (e.g. through relocation, redevelopment to reduce flood risk, diversification into new activities and markets etc.), and that this will have spatial implications which local authorities need to plan for with reference to the RES and Climate Change Action Plan (PPSI, 2005).
- Regionally specific opportunities for tourism, to take advantage of positive climate change impacts (or where climate change impacts may adversely

affect tourism) **could** be reflected in RSS policy on tourism, and **should** be reflected in the Tourism Action Plan (Planning Response to Climate Change, 2004).

- The RSS **should** acknowledge the effect that climate change impacts will have on regional habitats, agriculture and landscape character, and that this will have an effect at a regional level on the appearance of the landscape, the need for agricultural infrastructure development, and the need for flexible policies to protect and enhance biodiversity, with different responses required in the sub-regions (PPS9, Planning Response to Climate Change, 2004).
  - The need for local planning authorities to allocate land for habitat replacement in particular parts of the region (e.g. due to coastal squeeze) **should** be referred to in RSS, e.g. as part of a policy on coastal zone management (Planning Response to Climate Change, 2004).
  - In relation to forestry, the RSS **could** encourage the use of trees and woodland as a flood alleviation measure, for use in managing water resources, and to ameliorate local micro-climates, e.g. in urban areas, identifying the parts of the region where this is likely to be most beneficial (Strategic Framework for Trees, Woods and Forests and draft Outline Action Plan, 2005).
- 9.9. Much of what needs to be done to improve the current RSS relates to providing better clarity on implementation and the responsibilities of the YHA and its regional and local partners in taking forward policies on climate change. Detailed guidance could be provided in the Climate Change Action Plan.
- 9.10. In relation to monitoring policy implementation, the inclusion of targets and indicators for more policies relating to climate change will help to provide a better indication of how the region is performing towards its climate change objectives. Of course, targets must be both challenging and realistic, to ensure action is taken and climate change moves up the political agenda.
- 9.11. The Regional Assembly **should** therefore explore ways of ensuring data is available to monitor progress against climate change objectives with its regional and local partners, ensure transport data is consistently used across the region, and **consider providing guidance** to local planning authorities on how to measure progress towards mitigation and adaptation policy objectives.

### **What other regional strategies could or should address**

- 9.12. As referred to above, the RSS is one of a suite of regional strategies which should work together to achieve region's vision for the future as set out in 'Advancing Together'<sup>34</sup>.

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<sup>34</sup> Advancing Together: the Vision and Strategic Framework for Yorkshire and the Humber (2004)

- The **Regional Economic Strategy** should provide support for energy efficiency in economic development in general and continue to promote the benefits of acting now to save energy, resources and money. It should consider whether the region should encourage energy (and other resource) efficient economic sectors and discourage energy-intensive ones. The RES should provide support for locating economic development where it is in line with the RSS aim of reducing the need to travel. The RES should also encourage the development of the renewable energy sector in the region.
- The Regional **Sustainable Development Framework** and **Environmental Enhancement Strategy** could provide support and guidance for renewable energy production, and in particular grapple with some of the tensions between landscape, biodiversity and renewable energy schemes. The sustainable energy guidance for North Yorkshire could be rolled out to other sub regions. These strategies also have a key role to play in identifying where habitat fragmentation needs to be reversed and how adaptation to allow for changes in species distribution should be managed (e.g. through Local Development Documents and land management regimes).
- The **Housing Strategy** should promote energy-efficiency in both new and existing housing development (e.g. through the use of sustainability standards such as Ecohomes), particularly where it is publicly owned.
- The **Climate Change Action Plan** should include **detailed guidance** for local authorities, businesses and other organisations on the actions they should take to implement the RSS policies on climate change, and how to monitor progress. It should also promote the positive link between action on energy efficiency and savings for business, as well as the need for businesses to mitigate climate change, in conjunction with the **RES**.
- The **Regional Waste Strategy** has an important role in minimising the energy, resources and travel associated with waste management, by promoting the waste hierarchy and proximity principle.
- **Strategic Flood Risk Assessment and Shoreline Management Plans** will be key mechanisms for ensuring that development does not experience increased flood risk, and that changes to the coastline arising from the effects of climate change can be accommodated (Environment Agency, local authorities and partners). Land managers have a role to play in the provision of flood storage.
- **Water resource plans** provide the main determinant of where investment in water infrastructure will go, while **River Basin Management Plans** will address water quality issues (Environment Agency, LPAs, and water companies, RDA).

- The **Tourism Action Plan** should reflect specific opportunities for tourism, to take advantage of positive climate change impacts or where climate change impacts may adversely affect tourism.

### **Other actions for consideration by the Regional Assembly**

- 9.13. Other areas where the Regional Assembly could take action with regional partners have been identified as:
- The Regional Assembly could explore with partners the potential to limit greenhouse gas emissions from aircraft by linking any planning permissions for new flights from the region to increased fuel efficiency and emissions reductions from aircraft, and by not promoting development that is likely to generate increased demand for air travel (Progress in the Region, 2005).
- 9.14. Finally, the Regional Assembly could **lobby Government** for legislative and policy change on the following climate change issues. In this way it could seek to address those matters relating to national policy that currently prevent the region achieving its aspirations in terms of climate change (and its regional climate change targets):

### **Mitigation**

- Since the legal review suggests that there is a risk involved in the RSS requiring that all development goes beyond prescribed national standards (though less so in encouraging such an approach), the region should call upon the Government to accelerate the reform of the Building Regulations. While recent changes to the Building Regulations will significantly improve energy efficiency in new developments, there is still some way to go to bring them into line with best practice in relation to other sustainability and climate change issues, such as water conservation.
- The region should call upon Government to review its funding criteria to take into account the full environmental costs, with greater emphasis on greenhouse gas emissions, and to provide stronger direction and support for demand management measures, such as road user charging.
- To make significant in-roads to reducing emissions of existing building stock (both publicly and privately owned), the region should contribute to the recently announced Government review to identify measures to improve the sustainability of existing buildings. The review should consider setting targets for energy reduction within existing building stock and ensure that Government provides greater grant funding to local authorities and developers to achieve them.
- With respect to national policy, the region should call upon Government to carry out full SEA of all national policy that will have an influence on the development and use of land to determine the potential environmental effects. This would ensure that national policy (e.g. future

policy on Aviation and any future updates of the Sustainable Communities Plan) is 'climate-proofed' before adoption.

- With respect to lifestyle choices, the region should lobby Government to consider how it can use to much greater effect fiscal policy to encourage more resource efficient lifestyles. Examples include the comparative cost of travel by private car compared to public transport, and the level of tax on resource use such as energy. Whilst the social exclusion implications will be an important consideration, the cost of using energy could have a material effect on the success in achieving both the region's and national targets for greenhouse gas emissions.
- Relative performance between regions and local authorities, and between the UK and other countries still tends to focus on GVA per capita, which has a tendency to encourage increased consumption. The UK Sustainable Development Strategy (2005) notes that the Government will be developing other indicators such as ones based on life-satisfaction, well-being and ecological footprints, and the region should encourage Government to place greater emphasis on such measures when making inter-regional and international comparisons.
- PPS22: Renewable Energy should be revised to enable local planning authorities to set their own renewable energy targets (informed by national, regional and sub-regional targets), and to identify these along with preferred locations for renewable energy development in their LDDs.
- A Planning Policy Statement on Planning for Climate Change and Energy should be produced to provide firmer guidance on how to address climate change issues and deliver climate change objectives through the planning system.

### **Adaptation**

- The Assembly should call for Government to give clear policy direction as to how it expects climate change adaptation to be reflected in RSS, and the weight that will be attached to this issue compared with other policy objectives, such as the step-change in the delivery of housing. In particular, guidance is needed on how to address climate change as one of the 'environmental criteria' in directing regional housing distribution (PPG3, 2000).
- The Government should provide clarification on how to resolve potential conflicts between advice in PPG25: Development and Flood Risk and PPG3: Housing, relating to development in floodplains within existing settlements.
- PPG25: Development and Flood Risk should be revised to require Strategic Flood Risk Assessments to be carried out in all local authority areas.

- The Assembly should recommend that the Government review the Building Regulations to ensure that they are fully ‘climate-proofed’ to deal with climate change impacts – so that climate change resilience is required in all new buildings / conversions. This should include higher construction standards for buildings in floodplains, to include higher ground floor levels etc. The Regulations should also require that adaptation measures should not in themselves add to greenhouse gas emissions (e.g. through air conditioning).

**Land Use Consultants and Wilbraham & Co (the Planning & Environmental Practice of Cobbetts).**

**7<sup>th</sup> October, 2005.**

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